

# MARINE RECORD

ESTABLISHED 1878.

VOL. XXI, No. 48.

CLEVELAND---DECEMBER 1, 1898---CHICAGO.

\$2.00 Per Year. 5c. Single Copy

## LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and improve the character of the service rendered to the public.

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### REMOVAL OF WRECKS.

Colonel Lydecker, Corps of Engineers, U. S. A., has contracted with Captain James Reid, the salvage and wrecking master, to remove the wreck of the steamer H. A. Tuttle, at the entrance to Michigan City, Ind., for \$3,000. Reid has a big derrick-scow at Manistee, and his intention is to hoist aboard certain parts of the steamer that can be removed and blow up the rest of the hull with dynamite. Crosby, of Milwaukee, who bought the machinery and boilers, has removed the boilers and only awaits favorable weather to secure the engines, around which chains have been laid ready for a hoist at a time when the weather is moderate. Colonel Lydecker thinks there is a bare chance that the wreck will be removed sufficiently to allow of the entrance of the lumber fleet before ice stops navigation there entirely. Then it may be that ice will not block up the harbor until along in January or February, in which case some vessels can use it.

As to the City of Duluth wreck at St. Joseph, that will remain where it is all winter. It could not be removed this fall even were there an appropriation; and there is no appropriation. The wreck does not block the entrance of steamers, no matter how the wind may be, but schooners are at a great disadvantage when attempting to enter in a strong northwest wind. This is how the schooner Lena M. Neilson was barred from entering during a recent big blow, and had to sail on until she stranded on a lee shore further up the lake, according to the claim of her owner and master. Colonel Lydecker says that Captain Neilson's claim for damage against the government for the loss of his vessel will come to naught. The government is not responsible. The captain was taking his own chances when navigating the lake.

St. Joseph entrance has shallowed up to nearly ten feet,

owing to the action of the seas, but it will be dredged to the old depth next season, and the wreck will be removed at that time, thus making a safe entrance to that port again.

### NAVAL CONTRACTS AWARDED.

Contracts have been awarded for the construction of battleships, monitors, torpedo boats, and destroyers in accordance with the table given below.

NAME.	CONTRACTOR.	Contract Price.
<b>Battleships.</b>		
No. 10, Maine	Cramp & Sons	\$2,885,000
No. 11, Missouri	Newport News Shipbuilding Co.	2,885,000
No. 12, Ohio	Union Iron Works	2,899,000
<b>Monitors.</b>		
No. 7, Arkansas	Newport News Shipbuilding Co.	860,000
No. 8, Connecticut	Bath Iron Works	862,000
No. 9, Florida	Lewis Nixon	\$25,000
No. 10, Wyoming	Union Iron Works	875,000
<b>Torpedo Boat Destroyers.</b>		
No. 1, Bainbridge	Neafie & Levy	283,000
No. 2, Barney	ditto	283,000
No. 3, Chauncey	ditto	283,000
No. 4, Dale	William R. Trigg Co.	260,000
No. 5, Decatur	ditto	260,000
No. 6, Hopkins	Harlan & Hollingsworth Co.	291,000
No. 7, Hall	ditto	291,000
No. 8, Lawrence	Fore River Engine Co.	281,000
No. 9, Macdonough	ditto	281,000
No. 10, Paul Jones	Union Iron Works	285,000
No. 11, Perry	ditto	285,000
No. 12, Preble	ditto	285,000
No. 13, Stewart	Gas Engine and Power Co.	282,000
No. 14, Truxtun	Maryland Steel Co.	286,000
No. 15, Whipple	ditto	286,000
No. 16, Worden	ditto	286,000
<b>Torpedo Boats.</b>		
No. 24, Bagley	Bath Iron Works	161,000
No. 25, Barney	ditto	161,000
No. 26, Biddle	ditto	161,000
No. 27, Blakely	Lawley & Son	159,400
No. 28, De Long	ditto	159,400
No. 29, Nicholson	Lewis Nixon	165,000
No. 30, O'Brien	ditto	165,000
No. 31, Shubrick	William R. Trigg Co.	129,750
No. 32, Stockton	ditto	129,750
No. 33, Thornton	ditto	129,750
No. 34, Tingey	Columbia Iron Works	168,000
No. 35, Wilkes	Gas Engine and Power Co.	146,000

### THE LAKE FLEET ON THE COAST.

In a letter from Port Hawksbury, Gut of Canso, Cape Breton Island, dated November 16th, Captain John Hurley, of the barge Iron City, writes to a friend in Oswego concerning the lake vessels recently transferred to the Atlantic. He says the steamer Katahdin was the first to get away from Quebec with her tow, the barges W. D. Becker, Thomas L. Parker, H. D. Alverson and Red Wing. Because the Katahdin was not supplied with a condenser it took her fourteen days to make a run that other towboats make in seven. The tug Taurus left next with the barges Iron City, H. A. Hawgood, Wadena and Charles Foster. The third fleet to leave Quebec consisted of the steamer Simon J. Murphy and barges H. H. Brown, Porter, San Diego and Marion Page. The Murphy kept company with the Taurus until she encountered the gale in George Bay. Then she could do nothing with her tow at all. The Murphy lost both anchors and the Brown, Potter and Page one each. The San Diego wrecked her steering gear and the Brown had five feet of water in her hold. The tug Taurus picked up the barges. The steamer Aragon left Quebec November 9th with the barges John O'Neil, David Wallace, Camden and Verona. When off Gaspé, 375 miles out, a gale was encountered which compelled the steamer to drop the barges. The Wallace sailed to Hawksbury, the Verona and Camden anchored north of Pictou on the Nova Scotia coast, and the John O'Neil was driven ashore. There had been no word of the Aragon since she let go of the tow on the 11th inst. The barges Iron State, Annie M. Ash and J. C. Fitzpatrick towed from Quebec to Sidney, Cape Breton, ninety miles east to the Gut of Canso, to load coal for New England ports. A tug from Boston is to tow them.

### A BRISK YEAR FOR SHIP BUILDING.

The coming year is likely to see the most notable additions to the merchant marine of the United States that have been made since 1874. In 1874 there was added to the American merchant marine 2,147 vessels of 432,725 tons. American shipyards on the Atlantic and the Pacific are now crowded with work to an extent not known before in this generation.

The returns indicate that the yards of this country will within the next year add 400,000 tons to the register. Some of the additions will be very notable. Two 10,000 ton steamships are being built for the Pacific Mail line. They will ply between San Francisco and the Philippines, by way of Japan and Chinese ports. At the yards of the Cramps are being constructed four steamships of 4,000 tons each, which will run in a trade between New York, Cuba and Porto Rico. The New York and Cuban Mail Co., will add three or four new ships to its line. The Red D. line, between New York and Venezuela, which touches at ports in the Antilles, has had to charter several outside steamers until it can have new ones built.

At the Newport News yards, which are coming into great prominence, there is now under construction 83,140 tons. This includes six merchant vessels of 4,665 tons each for the Morgan and Cromwell line.

It may also be stated that the lake shipyards are not much behind their competitors on the coast, and, while several yards have contracts already booked for several months ahead there are other orders almost ready to be placed at yards where a stated time for delivery can be assured to the intending builders.

### THE LIFE-SAVING SERVICE.

The following is an abstract of the report of the general superintendent of the life-saving service:

At the close of the last fiscal year the establishment embraced 264 stations, 192 being on the Atlantic, 56 on the lakes, 15 on the Pacific, and one at the falls of the Ohio, at Louisville, Ky.

The number of disasters to documented vessels within the field of the operations of the service during the year was 402. There were on board these vessels 3,113 persons, of whom 12 were lost. The estimated value of the vessels and cargoes involved was \$7,168,390. Of this amount \$6,410,530 was saved and \$757,860 lost. Six hundred and sixty-three shipwrecked persons received succor at the stations.

The number of vessels totally lost was 59.

In addition to the foregoing there were during the year 365 casualties to small craft, on board of which there were 874 persons, of whom 10 were lost; value of the property involved \$199,705, of which \$177,825 was saved. Fifty-six other persons were rescued, who had fallen from wharves, piers, etc., the most of whom would have perished but for the aid of the life-saving crews.

The crews saved, and assisted to save, during the year, 471 vessels, valued with their cargoes at \$2,868,655, and rendered assistance of minor importance to 324 other vessels in distress, besides warning from danger by the signals of the patrolmen 226 vessels.

CAT ISLAND is identical with San Salvador, the West Indian island upon which Columbus landed in 1492 when he is supposed to have discovered America. In those days Spain was all powerful. A desolate derelict, the former Spanish cruiser Infanta Maria Teresa now lies amid the breakers off that coast. History's records are filled with illustrations of the irony of fate. The stranded cruiser is emblematic of the decay of a nation which abused its power—illustrative of how the old must give way to the new—of the resistless onward march of liberty and justice and progress.



## NEWS AROUND THE LAKES.

## DETROIT.

*Special Correspondence to The Marine Record.*

Steamers passing down the river show signs of having met and bucked the Ice King on their way down.

The steamer Yale delivered 165,000 bushels of corn here last week, which is the largest cargo ever received at this port.

The schooner John Breden, has been seized by the United States marshal to satisfy a claim held by the Ruelle Tug Co., for towing.

Two inches of ice formed on Portage Lake Thursday night. Vessels passing through Portage Lake after this will have trouble if the weather continues as cold as it promises.

The steamer I. M. Weston has been sold by William P. Robertson, of Frankfort, and S. S. Burke, of Desplaines, Ill., to Andrew Flagsted, of Montague. The price of the steamer John V. Moran, sold by the Union Transit Company to the Crosby Transportation Company, is given in the bill of sale at \$35,000.

The car ferries Tycoon and Mikado, of the Michigan & Ohio Car Ferry Co., are in the hands of the United States marshal with \$6,000 in claims for repairs, towing, etc., against them. James Davidson has also foreclosed a mortgage against them, and Dec 6, they will be sold by the marshal under the mortgage. Manager Moreton refuses to say anything regarding the future of the company.

United States Engineer Warren has completed a map of improvements which he will recommend for Kenosha harbor. He contemplates widening the entrance channel 100 feet, making a total width of 280 feet. The construction of a breakwater 300 feet outside of the harbor and running from northwest to southwest is also to be recommended. This breakwater will be 600 feet long and 30 feet wide.

Captain Rooney, who is dredging for the United States Government at the Limekiln crossing, began last Saturday night to blast away the Canadian bank in the project of deepening and widening the channel. Property owners along the channel claim that the crown patents give them title clear to the channel bank, and that he is taking their property. They have served notice on the captain to stop, but he paid no attention to the protest.

The iron car ferry Huron, which was built nearly a quarter of a century ago at Buffalo, and which has been in commission between Port Huron and Sarnia since then, has been taken to Windsor to be refitted for service between that port and Detroit. The Grand Trunk Railway Co., which owns the boat, has no further use for her in the St. Clair river since the tunnel was finished. The Huron has three seven-car tracks, and her hull and machinery are said to be in good condition.

Nine boats loaded this week at the Lake Superior & Ishpeming and South Shore docks, Marquette. With the departure of this fleet are shipping for the season will have ended. Last year 1,940,330 tons were shipped from that port. This year's shipments will exceed those of last by about 200,000 tons. With the development of some very promising mines and the probable resumption of work at a group of great ore producers, the shipping outlook for next year is very favorable.

It is now considered almost certain that the Wheeler shipyards at West Bay City will soon be in operation again. Local contributions, gathered chiefly by the former employees of the firm, will defray the most pressing debts and Mr. F. W. Wheeler has two large contracts ready to close as soon as the embargo is lifted off the plant. The two vessels which Mr. Wheeler made mention of may be the two new Bessemer line boats of which report has been made, but of this of course no one on the outside can speak with any certainty.

John E. Bury shipped last Thursday as first mate aboard the steamer Avon, bound for Duluth. The Avon was loading heavy trucks to be used in building railroad cars. Bury was standing on a gang plank directing the work, when suddenly he slipped into the river. The second mate pulled him out, but Bury was dead, although he had been in the icy water only a quarter of a minute. Bury was 35 years of age and his home was at Marine City. He was first mate of the steamer Orinoco all season until she laid up and it is said that he was very loath to ship in the Avon, it seemed as if he had a premonition of danger.

The People's Steamship line, owners of the steamer State of Michigan, are still looking around for a light draft speedy steamer to run with the Michigan on the west-shore route. They want a steamer to carry 150 passengers and 350 tons of freight on a draft of not more than ten feet. She will thus be able to enter such shallow ports as Lexington, Forestville, Sanilac, Harrisville, etc., from which the other steamer is sometimes barred because of her heavier draft. They say the success of the Michigan has exceeded their expectations. On every trip down the west shore of Lake Huron and on to Detroit she had a full cargo.

In the heavy gale on Lake Erie two weeks ago the steamer Tioga of the Union steamboat line became disabled by losing her rudder just after she rounded the Dummy, bound up, and she fell off into the trough of the sea. Tugs fortunately happened to be at hand, and she was picked up and towed to this port. For ten days past she was in the big dock at the foot of Orleans street, and only got away this week. Permanent repairs were made consisting of new shoe, rudder

and screw. The cost of a new stern post would have been quite large, so the old one was spliced. The dry dock and repair bill was large, but the loss of her service to the line will be larger. She has been especially needed during the last two weeks, when the package freight business has been the best for the last five years.

The steamer Edward S. Pease, towing the schooner Planet took fire when abreast of Port Huron on Thursday last, she dropped in alongside the dock and the local fire department assisted in putting out the blaze after an estimated loss of about \$1,000. Temporary repairs were made and the vessel proceeded. The Pease was formerly the Canadian steamer California and was built at Hamilton by Robertson in 1873, rebuilt ten years later. She is only 548 net tons, is given an insurance valuation of \$20,000 and is still on her first letter. Taking her work all through this season it is difficult to see how the little coach has cleared money enough to pay a watchman on her this winter, she seems to be one of those that never die, or down, it is to be hoped that when she does go as all must in the mutations of age she won't take anyone with her. One thing is certain she is well kept up, well manned, classed, rated and given everything in the way of outfit and equipment that the most careful and liberal management can suggest.

## BUFFALO.

*Special Correspondence to The Marine Record.*

The Bessemer liner Sir Henry Bessemer went to the Great Northern elevator at 7 o'clock in the morning and at 4:30 p. m. had discharged 196,000 bushels of wheat. She later left for Lorain to winter there.

State Superintendent of Public Works G. W. Aldridge of New York has issued an order that the canal system of the state would close on December 10, unless compelled to suspend navigation at an earlier date by reason of ice formation.

Lake captains who went to the coast with vessels chartered by the Atlantic Transportation Co. are returning. It is reported that the insurance companies refused to underwrite the vessels if they were placed in charge of lake pilots.

Mr. William E. Fitzgerald, president of the Milwaukee Dry Dock Co., visited this port for a day or two this week while en route to Ogdensburg. Capt. John Mitchell, of Cleveland was also here looking after some of his fine large fleet of boats.

Two canal boats, the W. F. O'Rourke and Mary A. Baker, cleared for Lyons yesterday. Their owner says this will be the most profitable trip of the season. He takes 20,000 bushels of barley at 2 cents, and the trip will consume only three days. The only expense was for the service of a tug to tow him to an elevator, the grain being free, on and off. The trip will net about \$400.

Manager Douglass, of the Western Transit Line, is apparently a good prophet. When in Detroit last summer to see the Troy launched he predicted a large movement of flour, basing his prediction on the demand from Europe which would arise when the new wheat crop was ready for the millers to begin grinding on it. The movement, however, has been larger than he thought of at that time.

Receipts of grain for the season to the end of November are 193,800,000 bushels against 182,300,000 bushels last year. Flour 9,741,000 barrels as against 11,000,000. Coal shipments are 2,366,000 tons as against 2,094,329 tons in 1897. Coal clearances on Wednesday amounted to 14,800 tons. The month's shipment was 386,615 tons, and the total grain receipts amounted to 40,036,107 bushels, with flour figured as grain.

Fire was discovered in the crew's sleeping quarters on the steamer Rochester of the Union line on Sunday as she was being moved to her elevator. It was extinguished by the steamer's own hose. The cabin was scorched and the men's clothing destroyed. The Rochester had a cargo of rye from Chicago, and only for the prompt action of putting the flames out considerable damage would have been done. The blaze started in some clothing hung near a steam heater.

THE U. S. S. Wisconsin, sister ship to the Illinois and Alabama, now under construction at Norfolk and Philadelphia, was successfully launched at San Francisco last Saturday. Her dimensions are as follows: Length, 368 feet; breadth, 72 feet 2½ inches; draft, 23 feet 6 inches; displacement, 11,528 tons; speed, 16 knots; I. H. P., 10,000; coal bunker capacity, 1,200 tons.

THE Menominee Herald, speaking of the lumber cut for this winter says that it is estimated by lumbermen that it will exceed former years by anywhere from 100,000,000 to 150,000,000 feet. The wages that will be paid this winter for chopping are placed at about \$215,000 per month. From 2,000 to 3,000 more men will in all probability be employed this year in the woods about the head of the lakes than last year. The wages paid last winter did not quite total \$75,000, and men were paid per month as low as \$10, whereas at present the wages are from \$28 and \$30 and upwards. This is much larger than wages have been for some years in the different lines of work connected with lumber camps. Chicago, New York and the New England markets have been supplied this year, so far, from the Lake Superior region to the enormous amount of 800,000,000 feet of timber, practically all this coming from the Duluth-Superior districts, Ashland, Marquette and the Soo districts; though the head of the lakes has supplied by far the greatest part of this supply.

## CLEVELAND.

*Special Correspondence to The Marine Record.*

Capt. James Davidson, of Bay City, visited this port on Thursday on business connected with his large fleet of vessels.

The boats between Cleveland and Toledo have quit for the season, the State of New York making her final trip last week.

Capt. Orville Green, who sailed the steamer Griffin for several years, was in command of the steamer Arthur Orr when she stranded on the north shore of Lake Superior last week.

Capt. Leonard, of the wrecked steamer Tampa, resided in Sandusky, O. Although the steamer was cast away on the north shore of Lake Superior there was fortunately no loss of life.

The widow of the late W. H. Radcliffe, one of the pioneer shipbuilders of this port, died this week. Like her late husband she was respected and loved by all with whom she was brought into contact.

As a result of the smallpox cases in Cleveland, all sailors who go to the Marine Hospital are being vaccinated. Sailors who are not patients will be vaccinated at the hospital free of charge if they so desire.

Mr. Frank Manton, agent American Ship Windlass Co., Providence, R. I., visited this port on Wednesday to close orders for the automatic steam towing machines manufactured by this firm under patent rights.

Mr. Robert Logan, consulting engineer and marine architect returned home on Wednesday from Chicago. The professional services of Mr. Logan seem to be in ever increasing demand, not only at this port but at the other principal lake ports as well.

The contractors L. P. & J. A. Smith, engaged in widening the river, are carrying on the work as speedily as possible. The temporary repairs on the west breakwater, caused by a whaleback barge acting as a battering ram, Mr. Louis Smith says, are now completed.

The barge Alice Richards, which has been converted into a fueling lighter for the use of the Carnegie company, reached Conneaut Monday in tow of the tug Morgan. The Richards represents a new departure in fueling methods. The new machinery was put into her by the Cleveland Ship Building Co., and the carpenter work was done by William Murphy.

Capt Daniel Buie, now in charge of the steel steamer Yuma, of the Wilson line argues strongly in favor of the balanced rudder on all lake vessels and calls upon shipbuilders to devise a rudder that will not punish the wheelropes, quadrant or other appliances fixed on the rudder head for steering purposes. Capt. Buie thinks a beam sea is extremely hard on the present form of rudders and the purchase that moves them.

The tug Helene and two pile-drivers were sold at auction Tuesday, by the United States marshal. The sale was made on a foreclosure of a chattel mortgage held by the National Bank of Commerce. The tug sold for \$2,500, and the pile-drivers for \$1,550. The property was bought in by the bank. The owner was Mr. John W. Averill, who recently filed a petition for voluntary bankruptcy.

Lorain is likely to have her fair share of vessels wintering at that port this season. With shipbuilding and repair yards convenient, and a good safe port, owners will not be slow in taking advantage of the facilities offered. The port ought, though, to have a good tug for ice breaking, so as to keep the river open, and the same craft might be provided with good pumps for protection in case of fire.

It is a pleasure to note that Mr. H. D. Coffinberry, late president of the Cleveland Ship Building Co., is now taking an active interest in municipal affairs. It is as needless to say that the office sought the man, as it is to remark that Mr. Coffinberry will only countenance straight forward, aboveboard dealings, with sterling integrity of purpose as the watchword throughout his incumbency of office.

Mr. Richard Lane Newman, general manager of the Globe Iron Works Co., has been elected a member of the Society of Naval Architects and Marine Engineers. Mr. Albert C. Dierick chief draughtsman, and Mr. Daniel Edward Force assistant general manager of the American Steel Barge Co., West Superior, Wis., are the recipients of similar honors as also is W. J. Wood draughtsman for the Goodrich line of Chicago.

Capt. Jack Beverly (local attraction Jack) is the temporary possessor of a chronometer that went down with the Maine in Havana harbor. Suppose Capt. Beverly will soon have to render unto Uncle Sam the equipment that belongs to the Navy Department now that he has "blown the gaff" on himself. Chronometers count for about \$500 worth and that is quite a little salvage item to recover from the sunken tank now corroding in the waters of Havana Bay.

The funeral of Lyman Perry Foote was held on Friday last. He was born at Dover, March 22, 1817, and came to Cleveland at the age of 24. The rest of his life, 57 years, was spent in this city. His early years were passed on a farm in the neighborhood of Dover. On coming to Cleveland he first worked at his trade of shipbuilder and afterwards became the principal of the firm of Foote & Keating, shipbuilders. He retired from business 23 years ago. During the entire period of his residence in Cleveland he lived on the West Side, and the house in which he died was his home for 31 years.

W. J. Connors, proprietor of the Buffalo Courier, master porter and stevedore and the grain discharger for the Lake Carriers' Association at Buffalo, visited this port on Monday



and held a consultation with some of the prominent managers and vessel owners. It is quite probable that Mr. Connors handles more general cargo during the season of navigation than all other master porters and stevedores combined. He has not entered the iron ore or bulk cargo trade in trimming, discharging, etc., but if he should make up his mind to do so he will swipe the whole bakery—taking the biscuit or a cake is too small a business for the redoubtable W. J.

An order confirming the sale of the steamer A. L. Hopkins, under the libel of the B. & O. Coal Co., was filed in United States court at Toledo on Tuesday. The price paid for the steamer was \$2,200, and the court ordered that after the payment of the court costs and the proctor's fees the balance be divided among the claimants. The United States marshal's fees at this port alone mounts up to a very considerable sum as she had the plaster on her main mast for quite a spell while tied up in the old river bed. The Chris Grover, of the Vessel Owners' Towing Co., towed the Hopkins to Toledo. She is 640 net tons and was built in Marine City in 1880.

Chaplain Jones, of the Floating Bethel, distributed to the needy and worthy poor, over one hundred baskets of groceries, etc., as a Thanksgiving gift. It can be safely said that there is not a private mission in this city that does a tithe of the good that the Floating Bethel does, and this steadily, year after year, and all through the year. Chaplain Jones is indefatigable in his efforts to alleviate distress, besides lending clerical aid at deaths and funerals. If ever a man tried to follow out the tenets of a sky pilot Chaplain Jones can be awarded the palm. Of course he has staunch influential and liberal christian friends standing by him, but he is the executive all through.

A communication has been sent out by the Chamber of Commerce this week asking for views as regards an international fish law. It is proposed to place fishing on the Great Lakes under control of the national government, to remove the duty from fish, to duplicate Canadian fish laws and to have closed seasons, etc. The propositions submitted are in the main favorable to fishermen in the deep water off Erie and lower lake ports, but would not do at the west end of the lake. For instance, a Port Clinton contemporary says "they propose to have a closed season on white fish after November 1. As a matter of fact white fish are not caught in this end of the lake until after November 1. The scheme evidently comes from the fish trust, who want everything in sight."

As I have frequently noted in this column Lorain will stand watching in its shipping development. With Ashtabula, Fairport and Conneaut to the east of us and the new port of Lorain to the west, Cleveland will have to look after her shipping interests more closely than ever. This week Lorain river was found navigable for a 16-foot draft four miles from its mouth, or, up to the docks of the Lorain Steel Co. The Minnesota liner Malta discharged a cargo of 3,600 tons of iron ore there this week and excellent discharging facilities at this point will make it a favorable port to charter to next season. Cleveland is not widening the Cuyahoga river, dredging and making other improvements a whit too soon if people will only consider that shipping must be encouraged and facilitated to make use of a good safe port. The next thing Lorain will be having built is a costly and adequate breakwater to protect her commerce.

The Cleveland & Buffalo Transit Co. has issued an illustrated card announcing the close of the season. Like all the cards issued by that company, its latest is of neat and original design. Its caption is "The Wind-up of the Season." It represents a barefooted coquetish maiden, sitting on the head of a wharf pile winding a ball of yarn, the threads serving as hawsers for the four steamers of the line. The card announces that the last trip will be made from Cleveland on Tuesday, November 29th, and the last from Buffalo on November 30th. We would suggest that the passenger agent, to whose eye for the picturesque the company is indebted for these handsome-colored illustrated notices, ought to drop fenders from alongside the flagship of the fleet when he represents a broadside view of her again. The bunting is nicely placed and the hull of the City of Erie would show up as it ought to if the chafing gear was off her side. People at a distance will wonder what those half dozen sticks hanging from the upper deck to the water's edge have to do with the speed, furnishings or facilities of a passenger steamer anyway.—Dress ship when you take photographs again, Mr. Herman, and show the hull proper.

The annual fish dinner given each spring and fall by Prof. A. R. Rumsey, chief shipping master of the Lake Carriers' Association, took place on Wednesday and was well attended. The Professor as mine host was hospitality personified, towards the close of the elaborate menu he touched lightly upon the science in which he has gained so many honors and introduced for the edification of his guests a number of his most proficient students who carried off their honors with that grace and agility only to be acquired through taking aboard the professor's striking course of energetic cramming and repeated poundings. The piscatorial banquet was partaken off by the most recherche party that ever invaded the shipping office. It was duly motioned that three cheers and a tiger should be donated to our host and others; toasts and speeches were duly in order, letters and telegrams from absent lake friends were read, but a slight dizziness pervaded the mentality of a number of the assembled guests when coupled with regrets from William Livingstone of Detroit, J. J. H. Brown, of Buffalo, J. S. Dunham, of Chicago and others, a cable from the Prince of Wales regretting his inability etc., was flashed before the merry party.

## CHICAGO.

## Special Correspondence to The Marine Record.

On Monday grain freights were active at 2 cents on corn to Buffalo.

The schooner Evaline, Kate Lyons, and Thos. Howland, and barges Mayne and Tasmania have gone into winter quarters at South Chicago.

Captain Britton, of Saugatuck, Mich., is negotiating with the Big Four and Vandalia railroads, with a view of putting on a winter line of steamers between St. Joseph, Chicago, and Milwaukee.

On the 23rd and 24th of November the Independent Tug Line's tug Prodigy picked up 20 schooners between Sturgeon Bay canal and Sheboygan, bound for Chicago. The Prodigy, with the assistance of the tug Welcome, Capt. Joe, took them in tow.

The steamer Santa Maria, Capt. Walter Hamilton, and consorts Marvin and Fryer, which arrived Sunday night with lumber from Cheboygan, Mich., will go into winter quarters here as soon as they are unloaded.

Capt. F. D. Herriman, of this port, and William E. Fitzgerald, president of the Milwaukee Dry Dock Co., also Frederick C. Starke, vice-president, Milwaukee, Wis., were appointed associate members of the Society of Naval Architects and Marine Engineers at the recent annual meeting.

The Evanston life-saving crew will store the life-boats for an emergency call, and go out of service the night of Nov. 30. The crew of eight Northwestern University students will retain their rooms at the station, and have expressed their willingness to be subject to the call of Capt. Lawson. The season's record shows four persons rescued.

The Graham & Morton Transportation Co.'s steamer City of Louisville left here Tuesday night, November 29, for St. Joseph and Benton Harbor on her last trip this season. She will go into winter quarters. The company's steamer, J. C. Ford, which has been running between St. Joseph and Milwaukee, has gone into winter quarters at Benton Harbor. This is the first time in many years that the company have not run winter boats.

The Chicago nautical school will be in session again this winter and it is expected that a larger number of students than ever before will take advantage of the technical instruction and pabulum so freely dispensed at this institution through the winter months. Of course those who know it all won't attend, in fact they will, or may be inclined to ridicule those who do, at the same time knowledge is the power that pilots in safety.

The steamer Parnell was held on La Salle street tunnel from 8 o'clock Tuesday night until noon Wednesday, when four tugs dragged the vessel over the obstruction by main force. The Parnell was bound out with a cargo of grain. Traffic on the main river was blocked for deep draft boats for sixteen hours. This is a horrible state of affairs for a port like Chicago and should mean a "key up all around" among those interested in the lake commerce of the port.

At Miller Brothers shipyard the barge Iron Cliff is in dock receiving 48 feet of new keel aft, some new bottom plank aft, new garboards, stern post, shoe and rudder, some new rail and bulwarks all around, some new deck beams and decks, new houses on deck, and calking all over; the steamer Normandie was in for a new wheel, rudder pintel and some bottom calking; the steamer John Craig was in for a new stem; the tug Luther Loomis for repairs to sea cock and some calking; the tug J. C. Evans for a new shoe.

The steamer Atlanta, Capt. David M. Cochrane, left here Monday night for Grand Haven and Muskegon on her last trip to the east shore this season. On her arrival here on Thursday she will be placed on the west shore route for the winter. The steamer City of Racine left here Tuesday night for Manitowoc where she will lay up for about two months, during which time her hull and machinery will undergo an overhauling. Steamers will continue to run from this point daily to Milwaukee and points north during the winter months.

The following schooners and barges have already gone into winter quarters or are stripping and getting ready to do so: James G. Blaine, A. Mosher, City of Sheboygan, C. H. Hackley, Ashland, C. J. Magill, Sophia J. Huff, Ada Medora, Stafford, Ralph Campbell, Cora A., Jessie Boyce, John Mee, Julia B. Merrill, Apprentice Boy, Vega, J. V. Taylor, Marvin, Fryer, C. Mickelson, Seaman, Ford River, Truman Moss, Lotus, Winnie Wing, S. A. Wood, Horace Tabor, Felicitous, Rouse Simmons, Guide, J. V. Jones, Alice, Mary Collins, Radical, Dundee, Libbie Nau, Jennette, W. B. Ogdenhozen, R. Mott, B. Calkins, Clara and Olga. The steamers Iron Age, Alice M. Gill, Chas. Street and Santa Maria have gone into winter quarters here.

The Dunham Towing and Wrecking Co. received a telegram Saturday night from Pickands, Mather & Co., Cleveland, managers of the whaleback fleet, to send a tug with steam pumps to the assistance of the whaleback barge 133, reported ashore on North Manitou Island. The tug Morford with two steam pumps on board, in charge of wrecking master Thomas Johnson, left here with orders to call into Sheboygan for further instructions. On her arrival there the orders were countermanded, as the whaleback barge was afloat and did not require assistance. On Monday the Dunham Towing and Wrecking Co. sent two steam pumps by special train on the North Western Railroad to Duluth for use on the Western Transit Co.'s steamer Harlem, ashore at Isle Royale.

## DETROIT MARINE POST OFFICE.

LETTERS REMAINING ADVERTISED IN DETROIT, MICH., POST OFFICE DECEMBER 1, 1898.

To get any of these letters, addressees or their authorized agents will apply at the general delivery window or write to the postmaster at Detroit, calling for "advertised" matter, giving the date of this list and paying one cent.

Advertised matter is previously held one week awaiting delivery. It is held two weeks before it goes to the Dead Letter Office at Washington, D. C.

Ahlstrom Capt. Fred, sch.	Jahn Wm. S.
Hawgood	Kulponski Charley
Allair John B.	Lyman Alonzo, Sch. Cleveland
Atkinson Chas.	Lewis Daniel
Breen Jas. I.	Mowe John
Boshaw Oliver, Str. Avon	Monroe William
Barnes Barney, Str. City of	Mason Capt. Joe
Rome	Morgan Henry
Carr John, Str. City of Bangor	Mulholand Tom
Clark W. C., Str. Avon	McCurdy Geo., Str. Neosho
Duhurst Chas. Str. J. B. Trevor	McKittrick Peter, Sch. Aber-
Donnelly James, 2, Sch. Nel-	deen
son	McHale E., Str. Genoa
Elsworth George	Ridley Henry, Str. Appomat-
Eaton Hoyt, 2, Sch. Aberdeen	tox
Fisher J. B., Str. City of Ban-	Rogers Pearl, Sch. S. H. Foster
gor	Rafferty Thos.
Fitzsimmons John, Sch. Aus-	Somers Chas.
tralia	Sloan A. W.
Green Fred, Str. E. M. Peck	Smith Clarence
Gibson James, Str. E. M. Peck	Smith Edward, Str. W. H.
Hagen William	Ketchum
Hemenger Capt. A., Str. N.	Tyler W. W.
Torrent	Wilson Geo., Sch. Aberdeen
Haden Tom, Bge. Armenia	Williams Fred
Hausen B., Str. N. Mills	Weeks Mrs. J. B.
Harmon Albert, Str. Bessemer	Worthley Saf
Johnson Harry, Str. E. C. Pope	Waldman Henry, Str. Mar-
Johnston Martin Str. Cumber-	quette
land	

## REPORTED BY THE LOOKOUT.

During the week ending November 26th the Duluth-Superior flour mills produced 93,250 barrels and shipped 83,835 barrels, of which latter 48,855 were domestic and 34,980 were for export. Stocks amount to 38,590 barrels.

The Chicago life-saving crew will quit service for the winter on December 10th. Since April 1 Capt. Frank Fountain and his crew have been on duty day and night and to their watchfulness and care is credited the rescue of 85 lives this season.

The Berlin Iron Bridge Co., of East Berlin, Conn., is erecting for the Waterbury Mfg. Co., Waterbury, Conn., a new blacksmith shop two stories high, 40 x 40 feet. The building is to be of fireproof construction throughout. The floor consists of concrete on corrugated iron arches, carried by steel beams and columns. The roof has steel trusses supporting the covering of corrugated iron lined with the Berlin Iron Bridge Co.'s patent anti-condensation lining.

There has been some anxiety during the last blow over the safety of the steamer Dixon owned at Duluth. The Duluth Herald man in his lengthy report said: "The Dixon has the benefit of a lee shore all the way, and even if she had met with accident to her machinery she has anchors to keep her drifting into mid-lake." Having a lee shore aboard she should drift ashore, not to mid-lake. The novice evidently meant to say weather shore; he ought to be caught on a lee shore once, with his pants down, then perhaps he might realize the distinction of being on the high or the low side.

A charter effected this week, the carrying out of which will mark the beginning of a trace that promises to figure prominently in Philadelphia's export trade in future, was that of the British bark Highlands, to load 2,000 tons of cast iron pipes for London direct. This will be the first full cargo of the kind ever shipped to England from this or any other American port. A large quantity of this material, however, has been exported to Glasgow by the Allan Line steamships, a contract to supply that city with American drainage and water pipe having been secured by Philadelphia.

For several years the foreign insurance companies, principally those in London, have been doing the greatest portion of the lake hull and cargo insurance. In securing this they made rates and concessions that the American companies, so long doing business on the lakes, could not compete with. The latter dropped out, at least the majority of them did. There can be little doubt but that the foreign companies have been doing business at a loss at least during the last couple of years. Now it has come to the point where they must either retire altogether and give up the field to the American companies, or make rates and conditions that will closely approximate those of several years ago, when the American companies had the business chiefly to themselves. In either case, it will be seen, the American companies stand a good show of coming back to the lakes and resuming the business of underwriting on a legitimate, fair paying dividend basis. There is a certainty that premiums on hulls will not near meet the expenditures which underwriters have been called upon to liquidate, although perhaps considerable "velvet" accrued from freight and cargo insurances, although even on these lines the policies are very liberal.



## THE METRIC SYSTEM.

The book on The Metric System of Weights and Measures, which was announced a short time ago as being in course of preparation by the Hartford Steam Boiler Inspection and Insurance Co., is now completed. President J. M. Allen's object in publishing it is stated in the preface in the following words: "The metric system of weights and measures is used so universally in foreign books and periodicals, that much time is consumed, and no little annoyance incurred by the American reader, in translating these units into their English and American equivalents, by aid of any of the reduction tables that have yet been published.

The English values of the first one hundred multiples of some particular metric unit are given and immediately following these there are two pages devoted to the inverse operation of expressing the first one hundred multiples of the corresponding English unit, in metric equivalents. The tables are grouped in the following way: First come tables of long measure, in which we find a comparison of the units used in measuring lengths, such as the inch, foot, yard, mille, centimeter, meter and kilometer. Then come the tables that contain the units that are used in measuring areas, such as square inches, square miles, acres, and the like. Next we find the units that are used in expressing the cubical contents of boxes, tanks, etc., such as cubic inches, cubic feet, and cubic yards. After this we come to units that are used in the measurement of fluids, such as fluid ounces, and British and American quarts and gallons. Next come the analogous units that are used in dry measure—the dry quart and the bushel. These are followed by the units, such as the ounce, gramme, and ton, that are used in the estimation of weight. Lastly, there are upwards of forty pages devoted to miscellaneous units, such as heat units, foot pounds, horse-power, pounds per square inch, etc., and the tables close with a comparison of Centigrade and Fahrenheit thermometer scales.

## EASTERN FREIGHT REPORT.

Messrs. Funch, Edye & Co., New York, report the condition of the Eastern freight market as follows:

Partially interfered with as the week's business has been, by the national Thanksgiving holiday, the reduction in the list of charters effected has nevertheless been considerably beyond a consequent proportion. The falling off, whilst heaviest in grain, is noticeable in every other branch of the export business as well. Freight rates have not undergone any noticeable change, the tendency continuing for a maintenance of full market rates, as developed in the subjoined list of fixtures for prompt tonnage, whilst the enquiry for later periods is comparatively light, and any such fixtures can only be effected at a decline in rates.

Our market for sail tonnage remains inactive, and, to a more or less extent, nominal. With the exception of a few large boats for long voyages, there is a scarcity of square-rigged tonnage beyond anything in this respect ever witnessed. Notwithstanding this fact, rates show no improvement. Our list of fixtures is bare of charters for petroleum in cases to the East, this fact being proof of the temporary stagnation of our market.

## RAPID COAL HANDLING MACHINERY.

There is now no longer any doubt of the success of rapid coal loading machinery. The latest invention has made it possible to load a vessel of 6,000 tons capacity within the limit of 24 hours, whereas two or three years ago, and by old methods, the greater part of a week would have been required to do the work. R. J. Mefford, superintendent of the Hocking Valley docks at Toledo, speaking of these modern facilities, says: "All records were overtopped by the Hocking docks in Toledo recently by the use of the rapid coal loading machine when the steamer Superior City, of 6,000 tons capacity, arrived at the dock for coal. She commenced loading at 6:15 a. m. and finished at 11:45 p. m., receiving a total of 5,923 tons. Allowing two hours delay for dinner and supper for the workmen, this shows an actual working time of 15½ hours, or at the rate of 382 tons per hour for the total time. For the days work of 11 hours there were loaded 175 cars, of 432 tons, per hour. When we consider the short time since 1,000 tons was considered a big day's work, we can realize the remarkable advance in the facilities of this business."

On her last trip down the big schooner Chickamauga had 146,000 bushels of wheat aboard. It was one of the largest cargoes any schooner has ever carried. The Chickamauga was built by Davidson this year and has made four trips.

## MERCHANT VESSELS PURCHASED BY THE UNITED STATES ON WAR ACCOUNT.

The war in which the country was engaged necessitated the purchase of a large number of vessels for addition to the fighting force of the navy and for auxiliary purposes incidental to a state of war. There is given in the table below a list of these, with their former and present names, date of purchase, and name of previous owner.

## VESSELS PURCHASED.

FORMER NAME.	RENAMED.	DATE OF PURCHASE	PREVIOUS OWNERS.
1898			
Columbia	Wasp	March 26.	J. H. Ladew
Alicia	Hornet	April 6.	Henry M. Flagler
Almy	Eagle	April 2	Frederick Gallatin
Hermione	Hawk	April 2	Henry L. Pierce estate
D. C. Ivans	Nezinscot	March 25.	Moran & Co.
P. H. Wise	Sioux	March 26.	"
Winthrop	Osceola	March 31.	Staples Coal Co.
El Toro	Accomac	March 26.	Southern Pacific Line
Wilnot	Potomac	April 14.	Ocean Towing and Wrecking Co.
Edward Luckenbach.	Tecums h	April 2	Luckenbach & Co.
Walter A. Luckenbach	Uncas	April 2.	"
Atlas	Wampatuck	April 4	Standard Oil Co.
Josephine	Vixen	April 9	T. A. B. Widener
Mayflower	Mayflower	March 19.	Ogden Goelet estate
Sovereign	Scorpion	April 7.	M. C. D. Borden
Creole	Solace	April 7	Cromwell S. S. Line
Diogenes	Topeka	April 2.	Thames Iron Works, (London)
(Not named)	Manly	April 13.	Chas. R. Flint
"	Somers	March 26.	Schichau Works, Elbing, Germany
Saturn	Saturn	April 2	The Boston Towboat Co
Lebanon	Lebanon	April 6	Philadelphia and Reading R. R. Co.
El Norte	Yankee	April 6.	Southern Pacific Co.
El Rio	Dixie	April 15.	"
El Sol	Prairie	April 6	"
El Sud	Yosemite	April 6.	"
Nichteroy	Buffalo	July 11.	Brazilian Government
Amazonas	New Orleans	March 16.	"
Almirante Abreu	Albany	March 16.	"
Merrimac	Merrimac	April 12.	Hogan Line
Niagara	Niagara	April 11.	Ward Line S. S. Co.
Sterling	Sterling	April 16.	Black Diamond Transportation Co.
Enterprise	Modoc	April 29.	American Towing Co.
No. 18	No. 18	April 18.	Philadelphia Trans. and Lightering Co.
Nashan	Nashan	April 6.	Frank Smythe
Zafiro	Zafiro	April 9	China & Manila S. S. Co.
Alice	Alice	March 26.	John M. Worth
St. Paul	St. Paul	Chartered	International Nav. Co.
St. Louis	St. Louis	"	"
New York	Harvard	"	"
Paris	Yale	"	"
C. G. Coyle	Choctaw	April 19.	W. G. Coyle
Penwood	Powhatan	April 8	Walsh & Doran
Fearless	Iroquois	April 18.	J. D. Spreckels Bros. Co.
Vigilant	Vigilant	April 19.	"
Active	Active	April 18.	"
Hercules	Hercules	April 26.	Standard Oil Co.
Southery	Southery	April 16.	Edward Luckenbach
Venezuela	Panther	April 19.	Red D. Line S. S. Co.
Yumuri	Badger	April 19.	Ward Line S. S. Co.
Yorktown	Resolute	April 21.	Old Dominion S. S. Co.
T. P. Fowler	Mohawk	April 23.	Cornell Steamboat Co.
Thespia	Hist	April 22.	David Dows, jr.
Restless	Restless	April 22.	Hiram W. Sidley
Illawara	Oneida	May 31.	Eugene Tompkins
Vikin	Viking	April 22.	Horace A. Hutchins
Chatham	Vulcan	May 2	Merchants and Miners Line
Penelope	Yankton	May 20.	H. E. Converse
Right Arm	Pontiac	April 23.	Merritt & Chapman
Philadelphia	Peoria	May 23.	Philadelphia Pilot Association
Corsair	Gloucester	April 23.	Pierpont Morgan
Memisha	Iris	May 25	Miami Steamship Co.
Free Lance	Free Lance	"	F. A. Schermhorn
John Dwight	Pawnee	May 6.	George T. Moon
Justin	Justin	April 23.	Bowring & Archibald
Hortense	Takoma	April 30.	O'Connor & Smoot
Aileen	Aileen	May 2.	Richard Stevens
Scindia	Scindia	May 12.	Henderson Bros.
Comanche	Frolic	May 28	H. M. Hanna
Illinois	Supply	April 30.	International Nav. Co.
Kingston	Cæsar	April 21.	John Holman & Sons
Dorothea	Dorothea	May 21.	Thos. McKean estate
Gov. Russell	Gov. Russell	May 11.	City of Boston
East Boston	East Boston	June 2.	"
W. H. Brown	Piscataqua	May 11.	W. H. Brown
J. D. Jones	Apache	May 24.	Merritt & Chapman
Celtic King	Celtic	May 14.	Wrecking Co.
Rhaetia	Cassius	May 24.	Federal Line (London)
A. W. Booth	Massasoit	April 25.	William Lamb
Joseph Holland	Hannibal	April 16.	Moran Towing Co.
No. 3 (ice boat)	Arctic	May 21.	Francis Stanley Holland (London)
Atala	Alexander	April 25	City of Philadelphia (leased)
Eliz. Holland	Leonidas	April 16.	New Star Blue Line Steamers (London)
Harlech	Pompey	April 19.	Francis Stanley Holland (London)
Abarenda	Abarenda	May 5.	Jas. & Chas. Harrison (London)
(Not known)	Scipio	May 5.	J. Graham
Peter Jensen	Brutus	June 3.	Geo. P. Walford
No. 55	Water Barge	June 3.	L. F. Chapman & Co.
Whitgift	No. 1	May 25.	Standard Oil Co.
Norse King	Nero	June 30.	McCondray & Co.
Enquirer	Rainbow	June 29.	Thomas Ronaldson
Inca	Enquirer	June 29.	W. J. Connors
Huntress	Inca	June 13.	Frank B. McQuesten
Stranger	Huntress	June 7.	F. C. Fowler
Kate Jones	Stranger	June 9.	Mrs. Mary Lewis
Bristol	Seminole	June 6.	Boston Towboat Co.
Eugenia	Cheyenne	July 8.	J. J. Cummings
Elfrida	Siren	June 9.	J. G. Cassatt
No. 295	Elfrida	June 15.	Dr. Seward Webb
Shearwater	Sylph	June 1.	John Roach & Co.
Sylvia	Shearwater	May 9.	Henry R. Wolcott
Hercules	Sylvia	June 13.	Edward M. Brown
Confidence	Chickasaw	June 25.	M. Revel
Kanawha	Waban	June 25.	M. Revel
Pedro	Kanawha	June 7.	John P. Duncan
Port Chalmers	Hector	June 7.	(Prize)
Titania	Glacier	July 1.	Federal Line (London)
Culgoa	Marcellus	June 13.	William Lamb
Lucilene	(Not on file)	June 4.	G. F. Walford (chart'd)
	Arethusa	August 12	Thos. S. Hopkins

## FLOTSAM, JETSAM AND LAGAN.

THE PARSON IN A FOG.

[Fairplay.]

The fog was dense; o'er shore and sea  
It spread its white obscurity.  
A steamer at the landing lay;  
She couldn't safely get away.

Amongst her passengers was one  
Who peered about to sight the sun;  
A bustling parson, spruce and smart,  
Intent upon an early start.

He spied at length the orb of day,  
And to the captain made his way;  
"Although its foggy, sir," he said,  
"Tis clearing nicely overhead."

The captain grinned and winked his eye  
As thus he made polite reply:  
"It's clear above, sir, as you say,  
But we ain't goin' that there way."

The Milwaukee Tug Boat Line has added a \$23,000 craft to the fleet. She was built at Benton Harbor.

Quite a serious collision took place last Saturday at Duluth between the large steel steamer Globe and the whaleback steamer James B. Colgate. Both vessels will be given temporary repairs.

It is reported that the Newport News Ship Building and Dry Dock Company has received contracts to build two ships for the Pacific Mail Company of 10,000 tons each and to cost \$1,500,000, and two ships for the Cromwell line.

Congressman Hager, of the Ninth Iowa District, will introduce a bill in Congress to admit Osborne Diegnan, one of the Merrimac heroes, to the United States Naval Academy at Annapolis, although he is past the regular age for admission.

Secretary of the Navy Long has increased the age requirement in the case of apprentices admitted to the naval service from 14 to 15 years on the ground that boys of the former age are not sufficiently developed physically to undergo training.

A submarine boat of a new type, the invention of a Berlin firm of engineers, is about to be tried at Kiel, by the German Admiralty. The boat, which carries only three men, has traveled three hours continuously under water at a maximum depth of nine feet.

All of the eleven dredges that have been employed in the Superior-Duluth harbor improvements this season have been laid off for the winter. The total amount of dredging taken out of Superior-Duluth harbor this year by the government dredges was 3,703,000 yards.

Lake captains who went to the coast with vessels chartered by the Atlantic Transportation Company, are returning to the lakes. It is said that the insurance companies refused to underwrite the vessels if they were placed in charge of lake captains while in the Atlantic coast service.

The International Navigation Company has ordered two twin-screw passenger steamers, each 560 feet long, for its Red Star line between New York and Antwerp, to be built by the Clyde Bank Ship Building Company, of Scotland. Two similar steamers will soon be ordered by the company at an American shipyard.

At a conference of representatives of trans-Atlantic steamship companies in London on the 15th, it was decided that two outward and two homeward ocean tracks will be used from January 15th to August 18th, and from August 18th to January 15th. Regulations will be circulated and hopes are expressed that all vessels will recognize them.

The Glasgow Herald says the American line has ordered six Atlantic twin screw steamers, two of Hawthorne & Leslie, of New Castle, and four of the Clyde Bank Ship Building Company. It is added they are intended for the Belgian-American service, and that they will fly the Red Star flag. The vessels are to be built at New Castle, England.

At the annual meeting of the Sandusky Yacht Club the following officers were chosen for the ensuing year: Emil G. Schmidt, commodore; G. Fred Anderson, vice commodore; Lane Lockwood, rear commodore; William F. Seitz, secretary and treasurer; Charles Buddenhagen, measurer; Frank W. Rawson, fleet captain; regatta committee, E. C. Thompson, John Wagnert and Mozart Gallup; delegate to inter-lake meeting, G. Fred Anderson.

A light-house tender, such as is needed in the eleventh light-house district, would cost the government at least \$40,000 and possibly more. She need not be as large as the Marigold, but must have plenty of capacity for a gas storage tank forward, for the supply of all the gas buoys in the district, and additional capacity for the carriage of some of the buoys to and from their stations; this additional room to be utilized in carrying coal and stores to the various stations during the summer season, when she could not be otherwise employed.

A curious incident of a meteor demagnetizing a compass occurred recently on the steamer Coningsby, at Philadelphia from Java. Captain Smith says that he jumped on deck in a hurry on the night of November 13th when he observed that the tell-tale compass in his cabin had suddenly veered to show the ship's course N. instead of nearly due West. The binnacle compass, however, showed no change and the chief officer, who was in charge of the deck, said that there had just been a brilliant meteoric shower close by.



### PROPER FITTINGS FOR SHIPS' BOATS.

The following communication which was printed in the Home Journal, New York, has been forwarded to the RECORD with a request for its publication in our columns. The writer is Mr. James Richardson.

"I notice in your last issue several letters bearing on the Mohegan disaster, and am glad you have given some space to the discussion of the causes of the fearful loss of life on that occasion. I trust that it will result in waking up the person having the supervision of proper fittings for life-boats.

"It may be 'carrying coals to Newcastle' to inform you that there are laws that bear plainly on this matter, and by reference to them it will be seen who is the proper officer to enforce them, and how they must be enforced. It will also be seen that they admit of no misinterpretation, are explicit and forcible, and, if carried out, would lessen the loss of life in disasters that may occur in the future.

"The law specifies among other things the kind of fittings to be used for the boats, etc., that no instrument or appliance shall be placed upon any steamer without the sanction of the proper authority, and that a heavy penalty shall be imposed for non-compliance with the law. These facts can be sustained by reference to the United States Revised Statutes 4488, 4489, and 4491.

"The assertion ventured in the Marine Journal of the 19th inst., 'that no like disaster to that which overtook the Mohegan will be chronicled against the toilers of the sea for many a day' will not allay the fears of those travelers who are conversant with the antiquated fittings for boats. Nor will the figures given by the veteran supervising inspector-general of steam vessels, as to the small number of lives lost on passenger steamers—arrived at the Lord only knows how—tend to make an ocean, river or coastwise trip any safer.

"From the published accounts of the survivors of the Mohegan disaster, it is plain that great difficulty was experienced in getting the boats swung out, even those on the lower side of the vessel; and, when they were swung out, they could not be lowered, owing to some defect in the blocks through which the falls ran. In one or two instances the falls had to be cut to let the boats down; and, when the boats reached the water, they were dashed to pieces before they could be released from the tackles.

"This is the result of carelessness on the part of the owners in not having proper boat-drills, false ideas of economy in not providing reliable detaching gear, and last, but not least, incompetent inspection by those appointed to execute the laws.

"No matter how new and formidable the ship may be, or how ably commanded, the results will be the same when an accident occurs, unless the owners are compelled to adopt proper means and take every precaution for the safety of those on board. This does not apply to the Mohegan alone, but to all vessels, both passenger and freight; and it will require only another disaster to more fully demonstrate these assertions.

"It is to be hoped that others will be induced to take the matter up, and, by vigorous agitation, so thoroughly arouse public opinion as to bring those responsible for this state of affairs to a realization of their duty. It may take as long to effect these necessary changes as it did to bring about a conference of the steamship magnates to determine upon safer routes of ocean travel. It is to be hoped that it will not, however, for, if it costs as many lives and ships to bring about better inspection, and the use of more reliable life-saving appliances, as it did to determine safer routes, the result will be appalling.

"It may not be possible to save the lives of all in disasters, but many might be saved; and to this end the public, through its mouthpiece, the press, must demand, and forcibly, that the laws be enforced."

### CARNEGIE AND SHIP BUILDING.

Andrew Carnegie, when attention was recently called to the fact that his name had been connected with rumors about the establishment of a new shipyard in this country, said:

"Yes; I called the attention of the Western ship builders to the opening presented for a great shipyard in New York nearly two years ago, and I have had letters from several upon the subject. I know also of a leading ship building concern in Great Britain which is considering the matter. It is obvious to any man that the United States is going to resume its original position as the chief ship building nation of the world. What is the use of sending thousands of tons

of steel to Glasgow and Belfast, as we are doing, when we might as well build the ships here and send them? A ship builder in this country to-day has the advantage of about \$4 per ton in cost of all steel materials, and he has all his wood-work cheaper than builders in either Great Britain or Germany, and if he cannot take the ship building trade of the world, what is the matter with our ship builders? I do not forget that we have three very creditable shipyards now—Newport News, one of the best in the world; Cramp's in Philadelphia, and Scott's, in San Francisco. These three shipyards will, of course, extend and prosper, but there is plenty of room for another shipyard here."

### GRAND HAVEN HARBOR IMPROVEMENTS.

At Grand Haven, Mich., the Grand Trunk Railway Co., in order to properly handle the increase of business, has begun a very large system of improvements. A new warehouse, 400 feet long—a duplicate of the present one—and several hundred feet of new dockage are being built north of Krause & Co.'s grain elevator. The Marinette Dredging Co. is dredging the river in front of the railroad company's property to a depth of 17½ feet. This valuable improvement is of equal value to the Detroit, Toledo & Milwaukee Railroad Co.'s dockage property.

### NAVAL VESSELS UNDER CONSTRUCTION.

The progress made during the past year in vessels under construction for the Navy Department has been, on the whole, very satisfactory. The work upon the battleships Alabama, Illinois and Wisconsin has been held back to an appreciable degree by the impossibility of procuring armor at the time when the work had progressed to such an extent as to make it desirable to have the armor in place. The progress made in some of the torpedo vessels under construction has not fully met the requirements of the contracts; but in very many cases this work is of a character entirely new to the contractors, and the delays which have resulted are undoubtedly due to the caution naturally displayed by inexperienced builders in advancing the work. In the case of most of the vessels the delay in receiving material was presented as the reason for failure to progress properly in the work. The responsibility for such delays rests entirely with the contractors, however.

The tabular statement below gives the condition of all vessels under construction July 1, 1898:

NAME OF VESSELS.	WHERE, AND BY WHOM BUILDING.	ESTIMATES OF SUPERINTENDING CONSTRUCTORS.	
		Percentage of completion July 1.	Probable date of completion.
Kearsarge.	Newport News Ship-building & Dry Dock Co., Newport News, Va.	61.42	August, 1899
Kentucky .....	ditto	61.12	August, 1899
Illinois a .....	ditto	48.74	April 1, 1900
Alabama a .....	Wm. Cramp & Sons, Philadelphia, Pa. ....	60.00	September 24, 1899
Wisconsin a .....	Union Iron Works, San Francisco, Cal. ....	40.00	September 1, 1899
Albany ..	Sir Wm. G. Armstrong, Mitchell & Co., Newcastle-on-Tyne, Eng. ....		
Chesapeake....	Bath Iron Works, Bath, Me. ....	3.00	June 16, 1899
Rowan .....	Moran Bros. Co., Seattle, Wash. ....	99.00	Completed except official trial
Dalhgren .....	Bath Iron Works, Bath, Me. ....	80.00	February 1, 1898
T. A. M. Cravan	ditto	60.00	March 1, 1898
Farragut b .....	Union Iron Works, San Francisco, Cal. ....	88.00	August 6, 1898
Davis .....	Wolff & Zwicker Iron Works, Portland Oreg. ....	94.00	November 1, 1898
Fox .....	ditto	88.00	December 1, 1898
Mackenzie .....	The Chas. Hillman Ship & Engine Building Co., Philadelphia, Pa. ....	99.00	Completed except official trial
Stringham .....	Harlan & Hollingsworth Co., Wilmington, Del. ....	35.00	January 29, 1899
Goldsborough	Wolff & Zwicker Iron Works, Portland Oreg. ....	15.00	In doubt
Bailey .....	Gas Engine & Power Co., Morris Heights N. Y. ....	12.00	February 1, 1899
Plunger .....	Columbian Iron Works, Baltimore, Md. ....	73.00	In doubt
Penacook .....	United States Navy Yard New York .....	20.00	December 1, 1898
Pawtucket .....	United States Navy Yard Mare Island, Cal. ....	18.00	December 1, 1898

Under the provisions of the last Congress for "increase of the navy" designs were prepared for the construction of 3 seagoing coast-line battleships, 4 monitors, 16 torpedo boat destroyers, and 12 torpedo boats, and bids for their construction invited by the department. Preliminary work upon the design of the gunboat for which appropriation was made to take the place of the U. S. S. Michigan has commenced.

a The probable date of the final completion of the Illinois, Alabama and Wisconsin is based on the supposition that all armor will be delivered without undue delay.  
b Delayed by accident on trial

### NOTES.

LORD KELVIN, better known as Sir William Thomson, patentee of compasses and deep sea sounding devices, who is now more than 75 years old, has just taken out a patent on an improved device for taking soundings at sea. Although his life work has been philosophical rather than mechanical, and has related mainly to the theories that underlie physical phenomena, Lord Kelvin is the inventor of a number of useful instruments, among them the siphon recorder, for registering cable messages, and the quadrant electrometer, as well as a number of other scientific instruments.

RECENTLY, Collis P. Huntington, the great railroad magnate, paid a visit to Newport News, Va., in company with A. MacKay, of Scotland, and John Crossley and James Dunn, of London. This visit had revived the report so general some time ago that an ordnance and armor plate plant will be established there. Another incident which served to give color to the rumor was the fact that all three gentlemen, in company with President Orcutt, of the shipbuilding concern, shortly afterwards went to Washington and had a conference with Secretary Long, all of which has kept the people at Newport News in a state of eager anticipation as to the outcome.

At the recent banquet of the Pittsburg Chamber of Commerce, Mr. Andrew Carnegie made assertions to which the widest publicity should be given, because it is substantially within the facts. He said: "There is not a district in this world to which the Pittsburg district cannot to-day send steel and pay the freight and deliver that steel as cheap, or cheaper, than it can be made at the point of delivery, if we except Colorado, to which the freight is greater than the difference in cost to manufacture at the two points. Should the South be successful in its present attempt to manufacture steel, we may have to except another point. Colorado excepted, the Pittsburg district has the whole world to-day at its feet. Pittsburg is, indeed, the steel city."

A correspondent of the New York Sun, Mr. F. F. Robinson, pertinently remarks that the recent agreement effected between trans-Atlantic lines as to the respective courses to be taken by each other in order to lessen the danger from fog and collision, is not sufficient in itself to secure ocean travelers against disaster. The proper equipment and handling of lifeboats is a no less important desideratum, as recent accidents at sea have clearly shown. Mr. Robinson claims that the authorities appointed to enforce the laws have duties in the premises, and that they should act promptly on the least sign of laxity in lifeboat drill on the part of any steamship company. We would also add that the stiff old purchases for boats' davit tackle falls, frequently rove off with hard laid hemp rope, absolutely prevent boats being lowered expeditiously, if at all, in freezing weather, hence the continuous and regular loss of life.

A DISPATCH from Baltimore says: The shipment of Maryland made steel rails to all parts of the world formerly supplied by British manufacturers has been going on for some time past, but the first consignment to be sent to Great Britain itself, in competition with the British made rail, was to-day (November 17th) loaded aboard the Lord Line steamship Lord Charlemont, at Canton. The contract calls for 2,500 tons of the rails which are to be used on a railway in Ireland. British vessels are mainly doing the carrying of the rails of their competitors, and steamships and sailing craft under the red ensign, carrying Maryland-made steel rails, are now en route to Vladivostock, Russian Siberia; Bombay and Calcutta, India; Jamaica and the Bahamas; South Africa; Australia; Nova Scotia; New Brunswick and many other ports where English rails were formerly used exclusively.

In an article on "Shipbuilding as a Field of Enterprise," the Iron Age offers the opinion that since we are now exporting the plates and frames of ships for use in foreign yards, the time has about come when we can profitably go into the building of ships for our own use. There ought to be profit for American shipowners in handling our large exports. But as to promoting shipbuilding by legislation, the Age is incredulous. "Dependence," says the Age, "upon legislation alone will never make of us a great shipping nation, nor yet a great shipbuilding nation. What, for instance, have come to the hopes entertained of a greatly enlarged shipping interest, based upon the postal subsidies now in force? But whenever the conditions of our trade favor the employment of American capital in shipbuilding, and our capitalists make up their minds to invest in this direction they are likely to meet with success, regardless of what the law makers may or may not do."





ESTABLISHED 1878.

Published Every Thursday by

THE MARINE RECORD PUBLISHING CO.,

Incorporated.

GEO. L. SMITH, President.

C. E. RUSKIN,	Manager.
CAPT. JOHN SWAINSON,	Editor.
THOS. WILLIAMS, Chicago,	Associate.
CLEVELAND,	CHICAGO.
Western Reserve Building.	Royal Insurance Building.

## SUBSCRIPTION.

One Copy, one year, postage paid,	\$2.00
One Copy, one year, to foreign countries,	\$3.00
Invariably in advance.	

## ADVERTISING.

Rates given on application.

All communications should be addressed to the Cleveland office.

THE MARINE RECORD PUBLISHING CO.,  
Western Reserve Building, Cleveland, O.

Entered at Cleveland Postoffice as second-class mail matter.

CLEVELAND, O., DECEMBER 1, 1898.

CONGRESS meets on Monday, December 5th, for the short session.

WILL the subscriber who sent us \$2 in an envelope, without other enclosure, post-marked Chicago, kindly furnish us with name, address, etc., so that due and proper credit may be given to him on our books.

THE old Defender of the America's cup may possibly out-sail the new craft designed as the 1899 Defender. There is a limit in model and material of construction, as well as equipment, beyond which designers can not go and we know well what the old Defender has done.

THE range finders for ascertaining the exact position of an object from the deck of a vessel is not the unqualified success which it was credited with being some time ago, and especially during the time that American war vessels were playing with the Spanish tanks and tubs.

A DISPATCH has gone the rounds of the press this week stating that the Great Northern Railroad Company had contracted for the delivery of half a million tons of coal at Sandusky. J. J. Hill, president of the company says that the Great Northern is not making public their supply contracts or purchases. In the event of a flat contradiction, such as Mr. Hill would usually give and in positive terms, it is surmised that the contract has gone through all right.

SO THE body of nautical savants at London known as the British Board of Trade have come to the erudite conclusion that the Atlantic Transport Co.'s steamer Mohegan was wrecked off the Lizard October 14 because she steered a wrong course. This certainly seems a little too thin to emanate from so august a body as the Board of Trade; asked how she got there, a Jimmy Ducks could have told them that the propeller put her ashore, not the course or compasses.

LAKE underwriters will be obliged to fall into the manner of doing business in all other parts of the world. Peculiarly local innovations will no longer count, radical changes have been made within the past few years and more are in view. Referring to assisting disabled, castaway or abandoned vessels, it was formerly considered an equitable compensation to pay a liberal tow bill and, or, days' pay for labor. Vessel owners are now taking a leaf out of the book on coast and ocean rules and are fast finding out the meaning of the term salvage and its concomitants, where unusual risks are incurred, adequate recompense should be awarded to the owner or his servants who risk property to save that of others.

## BOAT'S DAVIT TACKLES.

While the lack of equipment for lowering boats is not so marked on the lakes as it is on the ocean, and especially in the recent instances of the French liner La Burgogne and the American steamer Mohegan, it would be of inestimable benefit to the traveling public if through a conference, or otherwise, the passenger steamship lines would settle on some one good modern device for hooking on, hoisting, lowering and detaching boats. In this connection not only might the davit tackles be dealt with, but the chocks on which the boats rest when at sea, also the davits themselves, as well as the falls, purchase and methods of hooking and unhooking boats should be taken into account and given due consideration.

All the discipline, skill, bravery and seamanlike conduct that ever was witnessed on the deck of a ship is of no avail if appliances can not be worked when it is found necessary to give the order to lower away boats in an emergency. The very least that owners can do is to furnish the best possible equipment in boat lowering devices so as to give the poor fellows a chance for their lives and to save the lives of those of their passengers when called upon. The abominable old purchase with the lower double block having a short necked swivel hook has been the means of crippling scores of seamen by bruising and breaking their hands and fingers, it was equally as bad as the old time naval style of catting an anchor, when it was expected that at least one or two blue jackets would lose the number of their mess before the mud hook was cat-headed. Besides the injury to the men, boats were frequently capsized, bilged or swamped in lowering and quite as much difficulty was experienced in hooking on in a seaway to hoist the boats to the davit heads again, as there was in detaching them from the tackles when lowered.

Pending the action of private firms in this direction we would suggest that it would be an admirable line of study for the United States Board of Supervising Inspectors of Steamboats to take up and eventually determine which is the best all around device for the expeditious handling of boats under hard weather conditions, as for any tests made in smooth water and fine weather, that is, under all favorable circumstances, such trials would be of no moment, or partake of the nature of a grievous wrong as the results could but prove totally misleading.

The life-saving service can render no aid in the solution of this question as the boats are on ways and placed ready for launching, but there are other government departments where exhaustive tests could be made, as for instance, the revenue marine service, the light-house supply boats and tenders, the coast survey craft and other departmental tonnage even including the navy proper. The Supervising Inspector General of Steamboats could certainly bring about measures whereby the best device, whether it be native or foreign, might be adopted and its proper working vouched for in the annual inspection of equipment carried out by the local steamboat inspectors of the various districts. This and similar measures with methods of careless or arbitrary inspection practices will not down until corrected. In the present matter of boat equipment, the general adoption of one device in the mercantile marine, in the several departments of the government, as well as the naval service, would be of inestimable benefit to the sailing community and those who on business or for pleasure bent travel by water. The one universal purchase adopted, sailors in every grade would become accustomed to, and expert in handling boats alongside a ship, even as their practice gave them skill with the old fashioned "trouble courters" in use until modern invention and the exigencies of sea life demanded and produced safe and reliable devices for hoisting and lowering boats from the davit heads.

## THE CONSERVANCY OF CLEVELAND HARBOR.

Colonel Jared A. Smith, Corps of Engineers, U. S. A., in charge of the conservancy and improvement of rivers and harbors on Lake Erie, is an energetic, conscientious federal officer who does not believe in laying on his oars, taking things pleasant and allowing details of his duties to go to the demnition bow wows.

Colonel Smith found that the municipal authorities persisted in dumping refuse, dredgings, etc., in and around the harbor so as to form shoals. The practice has continued in spite of, or notwithstanding his repeated protests, and, as what is everybody's business is no one's, the Colonel's disciplinary and professional patience became exhausted, with the result that he secured a righteous injunction restraining the city from making the port an unsafe one for vessels through dumping refuse in and around its entrance.

Jealous and somewhat miffed at finding there was a higher authority which could prevent the commercial blockade of an important lake port, there was an attempt made by the head of a paltry city department to make it appear that the decision would throttle public enterprises in Cleveland, though the District Court judge stated clearly, judiciously, discreetly and emphatically that he had no purpose to interfere with dumping under such regulations as could be made by authority of a federal statute.

Still smarting under the collar, jack-in-office style, or like the sulky spanked baby, the Director of Public Works feels that his dignity has been assailed, talks of state rights, appeals to the Supreme Court, etc., etc., and presents the general demeanor of a Willie Willful, wants to do as he thinks he wants irrespective of the general welfare of the port.

The question having assumed the foregoing interesting phase, Colonel Smith wrote to the Secretary of War, and in reply received notice that he might designate a space in the lake where dumping could be done without danger or interference with navigation. He has complied with his instructions, and public work may proceed without interruption. There was never any occasion to curtail it, that is, unless the city is not inclined to abide by the ruling of the War Department, and is determined to carry the injunction case to a higher court, for the purpose of ascertaining the rights of the city in the premises. It appears, however, that nothing is to be gained by such a course, for the city would undoubtedly be defeated in the higher courts.

Judge Ricks granted the injunction and there is no question about its being an equitable and righteous one, yet, if it had not been for the well disposed energy and the broad sentiment, accompanied by the acme of professional pride and skill evinced by Colonel Jared A. Smith, shoals, bars and every other old thing would sooner or later have developed at various points around the outer harbor of Cleveland.

It is small wonder that so many wheel chains are carried away when vessels are in the rivers or passing each other at close quarters; in fact the wonder is that the occurrence is not more frequent when the treatment that wheel ropes are given is taken into consideration. Take the case of a large vessel proceeding at eight to ten miles an hour, an order is given say to starboard, over goes the rudder assisted by all the steam necessary until it is jammed across the sternpost and held there without the play, or give and take of a link or two on the wheel chains until it is time to ease it. Of course in many instances it is absolutely necessary to jam the rudder hard over even if the pintles and gudgeons in the case of a large tow barge or consort had to be bursted off the rudder and sternpost; at the same time, it is hard, cruel treatment and only a careful daily inspection can show what the wheel chains, or their weakest part may have undergone in the way of strains and stresses. Where the wheel chains are led under the main deck and the vessel is loaded there is no opportunity given for this daily inspection, oiling, etc., consequently, when a casualty does take place, the query occurs: Who would have thought those heavy chains or excellent steel wire ropes could have given out? Everything is comparative, and the strength of a chain is at the weakest portion of the most distressed link or at the hardest nip that shows on a steel wire rope and there is no other alternative but a careful daily inspection if vessels with powerful steam steerers are to be carried through a season of navigation in safety, that is, without injury to herself or damaging others.

LAKE pilots and masters are kept just as busy throughout the season of navigation as any class of men under the sun. Vessels are in and out of port like rabbits cavorting around their burrows, consequently the officers have but little leisure to take observations to determine the errors of their compasses or other so-called or thought extraneous duties. The RECORD has printed a table of the Sun's Amplitudes or Bearings each week during the season of navigation in order to facilitate the work of those who were overtaxed in the short trade between nearby ports. This table showed the direction in which the sun would rise and set, and, if the compass did not correspond with the given bearings while the vessel was heading on any course, the circumstance sounded a note of warning and called for extra watchfulness until the deviation was fully explained. It is with some degree of satisfaction that we now learn that in at least two instances the bearings given in each weekly issue of the RECORD were closely attended whenever opportunity offered throughout the season.



THE last couple of gales furnished an excellent opportunity for the United States Steamboat Inspection Service to inform the lake marine regarding the cause of the many recent strandings, or, perhaps, the Supervising Inspectors will wait until private interests are compelled to take up this line of examination so as to throw some light on the tides, currents, compass deflections, courses shaped, etc., etc. A general underwriter's agent on tackling this subject has been enabled to do wonderful work towards the professional enlightenment of pilots; he is still in the field and apparently willing to throw all possible safeguards around the conduct of the lake marine, but what is our vast inspection service doing? There is no question but that this arm of the Treasury Department requires reconstruction, in fact, it always followed where private interests led, although frequently it had and has to be spurred along to make it follow. The United States Steamboat Inspection Service should take the initiative in all departures affecting the best interests and welfare of the mercantile marine instead of delegating its duties to individual and private interests.

THE piling up of two large steamers on the north shore of Lake Superior at the same time and within nine miles of each other last Tuesday morning, may go far to bear out the oft-repeated statement that compasses are unduly deflected when close in with the land on the north shore of Lake Superior. As one of the steamers was iron and the other wood there is every reason, so far, to believe that the compasses were affected by some agency outside of the vessels, their construction or equipment, both steamers, and especially the steel vessel, was in charge of one of the oldest and most experienced and successful shipmasters on the lakes and it is to be hoped that the recent casualty will in no way affect his standing as a safe and expert pilot and navigator among owners and underwriters. Strandings under trying circumstances are of almost daily occurrence, and it seems to be only a question of time, place and opportunity for a propeller to fetch up any steamer, for of course it is always the propeller that puts the steamer ashore no matter what spot she may pick out to take a rest in or to leave her bones there altogether.

A REFERENCE to our advertising columns will show that the Chicago Nautical School will again impart technical knowledge to those who are not already too well versed, and award underwriters' prizes to the most efficient and skillful fresh water sailors, which leads us to remark that it now looks as if the endorsement from a marine insurance agency would show superior qualifications if not ultimately supersede the license forms issued by the government through its Treasury Department officials.

#### LAKE FREIGHTS.

The latest freight on ore from Escanaba is quoted at 70 cents on a few outside charters to Ohio ports though Buffalo paid 70 cents earlier in the week. The Lake Superior rate is unchanged at \$1 with an almost cessation of shipments as the ore has begun to freeze in the pockets and steaming can do little or no good. An innovation in ore carrying is the idea of holding the cargoes in the vessels until spring. It appears that discharging facilities for vessels are not yet in order at the mills in Lorain and about 75,000 tons of ore will be held in the vessels of the Minnesota fleet until about March 1. A 10 cent advance was offered to hold the ore all winter, but it is not stated what the Minnesota fleet's terms are for the Lorain accommodation.

Coal rates have remained steady at 40 cents, Lakes Superior or Michigan, but it is now stated that 50 cents would be paid on a few cargoes to Lake Superior if tonnage was available. A 6,000 ton cargo from Sandusky and tow barges to go with it from Cleveland is about the last of the coal shipments for the head of the lakes this season, unless, perhaps, a few of the very latest up cargoes may be taken by vessels which intend wintering at the head of the lakes and this is likely to be carried in whaleback bottoms.

Grain rates from Chicago to Buffalo held steady at 2 cents on corn until Wednesday, when, through an over run of tonnage the figure dropped to 1¾ cents, a sort of a backward advance at this time of the year when the change ought to have been all the other way, especially too in the face of the many casualties to vessels during the past week.

Duluth-Fort William rate is at 2½ cents, a decline of ¼ cent from Duluth and ½ cent Fort William, with a supply of tonnage fairly equal to the demand and it is questionable if any fancy figures will be obtained this fall although it is well known that one Cleveland vessel owner

at least, usually gathers in a good rake-off with his last couple of cargoes from Lake Superior and he has done it regularly too.

Extended insurance on the best class of risks expires on December 12, every hour of which will no doubt be taken advantage of according to present indications, and in any case the policy continues in force until the vessel reaches her destination, if it takes a week. Should the weather continue at all favorable quite a fleet of high-classed boats may be found adding a little "gilt to the gingerbread" for some time after that date, but these will be boats managed by men who have had lake experience and can weigh the probable chances of success in their adventure, judging from the standpoint of a thorough knowledge of their boats and what they may have to contend with up to the last push.

#### ESTIMATED LOSS OF VESSEL PROPERTY.

A cursory estimate of losses to underwriters and vessel owners on the lakes for the season of 1898 places the probable figures at \$2,500,000. This may be increased though, before the close of navigation, but without any more casualties it will hold first place for losses in the history of lake navigation.

The year 1895 had hitherto held the record with a total loss of \$2,097,000. It still stands as the closest rival with the memorable season just being brought to a close.

The storms of October and November have made this an extraordinary year. Lake Superior has had a share of the wrecks, with the Straits of Mackinac and narrow passages of the north to increase the totals. Three steamers went down with a loss of \$375,000. The storm of Oct. 25 took about \$300,000 in property values, and the gales in November destroyed nearly the same amount.

#### TO MODIFY THE ANGLO-AMERICAN LAKE TREATY.

The Anglo-American Commission, now in session, having for their object a modification and reconstruction of the international treaties, etc., affecting trade and other interests between the Dominion of Canada and the United States, and in which the Dominion legislators represent their country for the British government, have about settled any past or existing differences in which the lake States are more nearly concerned.

The main points of contention as to the lakes related to the fisheries and the maintenance and building of naval vessels on the inland waters. As to the lake fisheries it is understood that the agreement contemplates a joint regulation for a closed season, size of nets, etc. This will remedy the present defective system by which the fish in some parts of the lake are protected by local laws, while in other parts they are being fished out by the absence of all restrictive laws.

Concerning the building and maintenance of armed vessels it is understood that each side has been willing to grant concessions, and that the present treaty regulation will be considerably modified and reconstructed.

#### LAKE INSURANCE POLICIES.

On the second class vessels insurance formerly expired at noon of Nov. 30, and Judge Swan, District Court of Detroit, some time ago based a decision on the fact, and called that hour the close of navigation on the Great Lakes. Since that time it has held as a precedent in law suits. But since that decision the insurance syndicate have made a concession to the second class boats by calling Dec. 1, or the midnight of Nov. 30, the hour of ending their policies. If these vessels happen to be out at that time, they are given an insurance extension, but the rate is much greater than charged the A1 boats.

With the first class vessels the insurance expires, if they are in port, on the midnight of Dec. 11. If the vessel happens to be on the lake with a cargo contract departure having been made prior to the expiration of the insurance, her insurance policy is extended at pro rata rate, which is the smallest the insurance syndicates have been willing to grant and which is so small that the owners have never protested against paying it. The extension continues until her arrival at destination, even if it takes 10 days after the nominal time of ending. If she is held up at a way port by ice and compelled to stay there all winter, insurance ceases on her arrival at that point.

THE Bethlehem Iron Co., South Bethlehem, Pa., have the distinction of furnishing all the shafting for the U. S. torpedo boat Davis, contracted by the Wolff & Zwicker Iron Works Co., Portland, Oregon.

#### EARLY MARINE ENGINEERING IN THE UNITED STATES.

In 1830 gongs for the engine room were unknown, and in many of the boats, when the pilot was in his house (if there was one) or on the deck over the engine room, he would signal to the engineer by the strokes of a stick or cane upon the floor of the house or deck. All boats of course carried bells, and by them all notices of departure and of arriving were made known, and all salutes between boats were given by their bells. To blow steam, as is now done by a whistle, was intended to be a challenge or an insult.

In July, 1837, the first steam launch, the Sweetheart, 35 feet in length, 4 feet 3 inches beam, and 3 feet depth, engine 4 x 12 inches, wheels 3 feet 6 inches in diameter, and boiler horizontal fire-tubular, designed and constructed at the United States Navy Yard, New York, by the writer, then chief engineer of the navy, was completed, and on her trial and succeeding trips around the city of New York was saluted with the bells of passing steamboats and cheered by people who rushed to the ends of the piers to witness the novel sight. She attained a speed of 8.5 miles per hour. The engine was subsequently transferred to the United States Naval School at Annapolis.

Fuel, up to the year 1836, was wholly pine wood, though up to that time some owners of steamboats commenced experimenting upon the practicability of using anthracite coal. A steamboat on her route of six or more hours could not have the capacity in her fire-room to contain all the wood required, and was compelled to pile it upon her side houses; and such boats as were on a long route, as from New York to Providence, were compelled to invade their upper deck with wood, and upon leaving the city had somewhat the semblance of a floating woodyard.

In 1839 anthracite coal was introduced in the furnaces of the steamboat North America, plying on the Hudson River between New York and Albany, and, to aid its combustion when a high pressure of steam was required, a fan-blower, driven by a belt from the wheel shaft, was first resorted to, but soon after a small independent engine was used, connected by a belt to the blower. Anthracite coal was soon afterwards first burned without auxiliary draught in the open furnace of a steam boiler.—Charles H. Haswell in Cassier's Magazine for December.

#### CASUALTIES OF THE WEEK.

This has been the most disastrous week of the season. If vessels suffered on the New England coast, the lakes also caught it, but there is one cause for congratulation and that is the general safety and survival or rescue of the crews from all lake wrecks, while the opposite proved to be the case on the coast during last Sunday's heavy weather.

The most extensive losses are on the Lake Superior list, included in which is the Arthur Orr, Osceola, Harlem and Tampa. Lake Michigan caught the Hiram W. Sibley, St. Lawrence, John Mitchell and consort and a number of schooners, one of which, the S. Thal, took all hands with her.

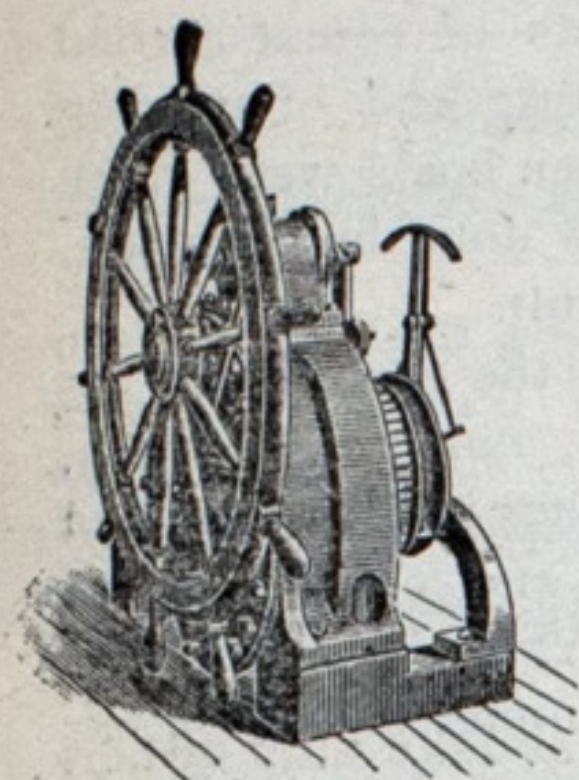
Minor strandings, groundings, etc., have been numerous. The Escanaba, for Duluth, stranded at Munising, released after jettisoning 1,000 barrels of salt. The steamer Desmond fetched up on a shoal in Northport Bay and after jettisoning part of her deck load of lumber came off leaking badly. The schooner Fassett is a total loss at Sand Beach. The steamer North Wind halted for awhile on Pipe Island and lightered cargo before floating. The S. S. Curry had touch and go damage off Duck Island, Lake Huron, and dry docked at Duluth. The steamer Gladstone grounded at Bar Point through a lower stage of water than usual, but she was water borne and floated without damage as soon as the water raised a trifle. The schooner Idea, abandoned in Green Bay, fetched up near Long Tail Point light. The Soo City, of the Holland and Chicago Line, stranded, or rather fetched up at the entrance to Holland and within 500 yards of the piers. The steamer Saginaw, disabled, was picked up by the Preston, off Thunder Bay Island, with part of her deck load gone, and the Myles with loss of her rudder was towed into Superior by the Bennington.

A number of less important casualties also took place, but as we have said with no loss of life if we except Mike Britz, second engineer of the St. Lawrence, lost while the crew was being taken off by the life-saving crew.

THE work of constructing the yacht British Shamrock for Sir Thomas Lipton, the challenger for the America's cup, will be commenced at once. A firm at Essen, Germany, will supply light-weight nickel steel plates for the portion of the vessel's hull below the water line. It is believed that aluminum will be used for the upper part of the hull and for the yacht's fittings.



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Has large hand wheel.  
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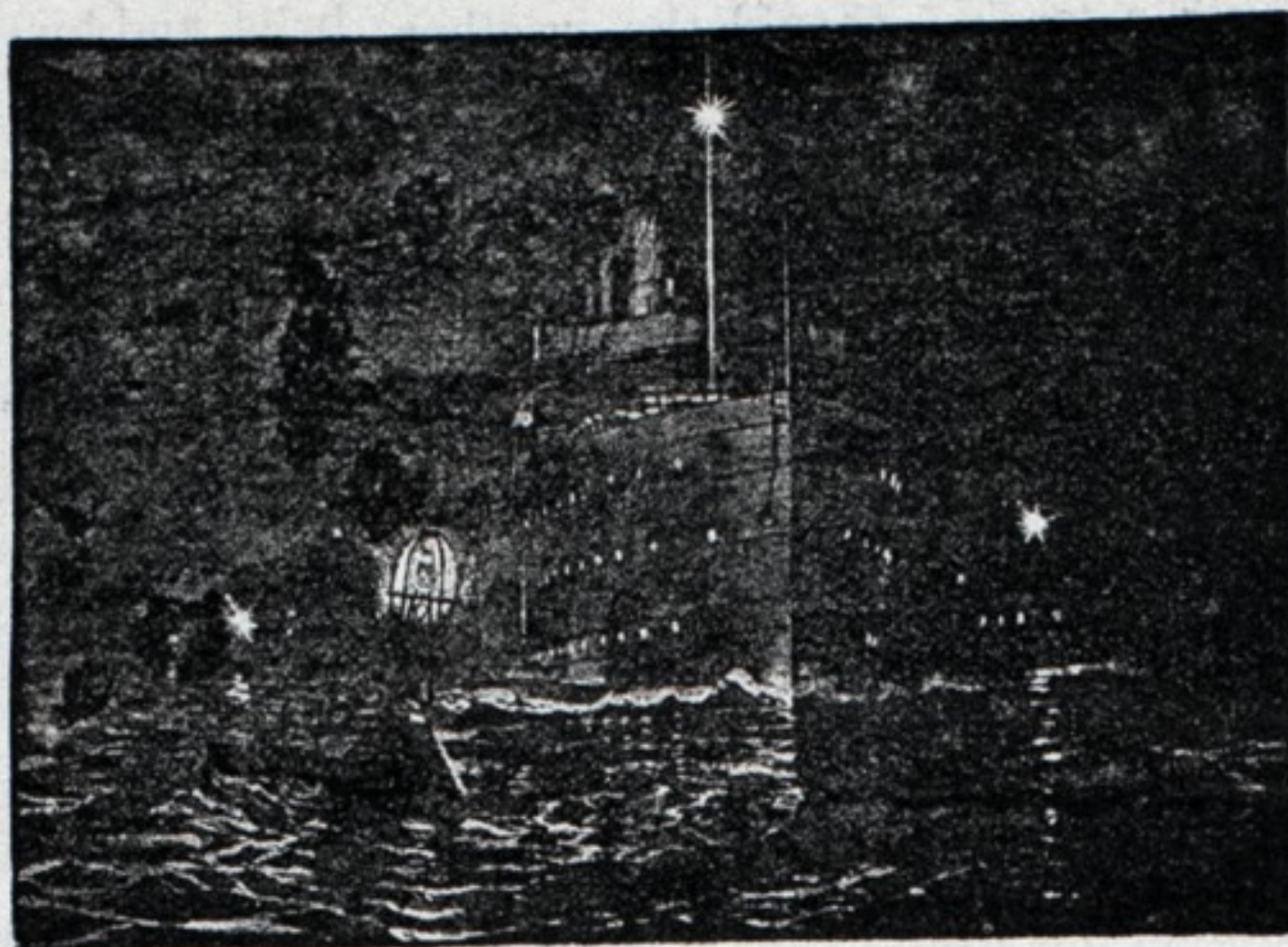
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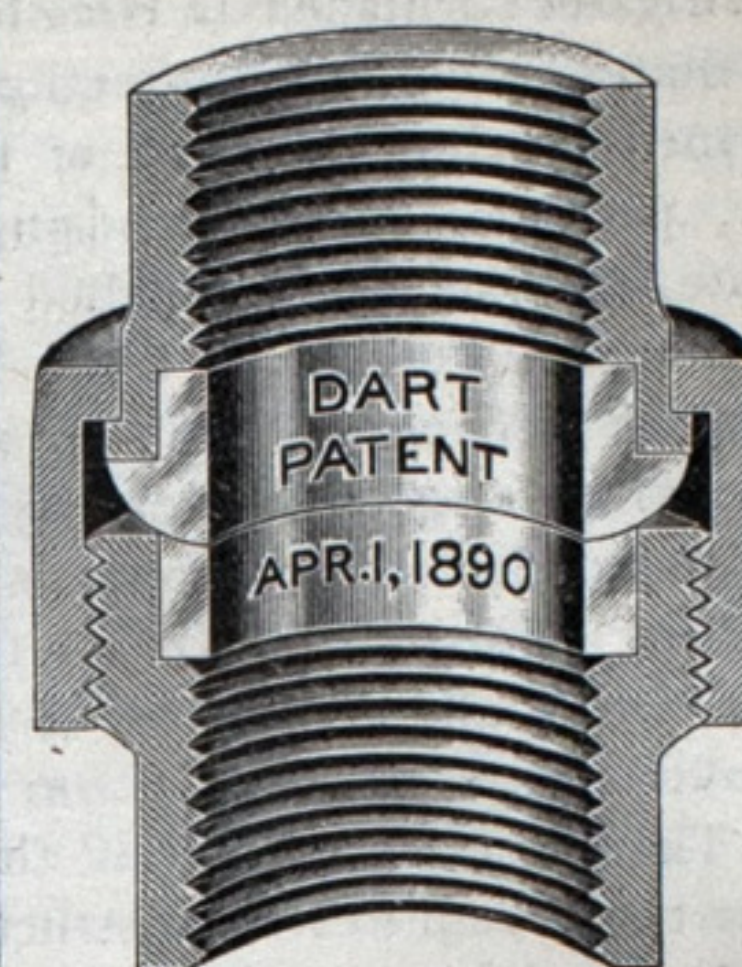
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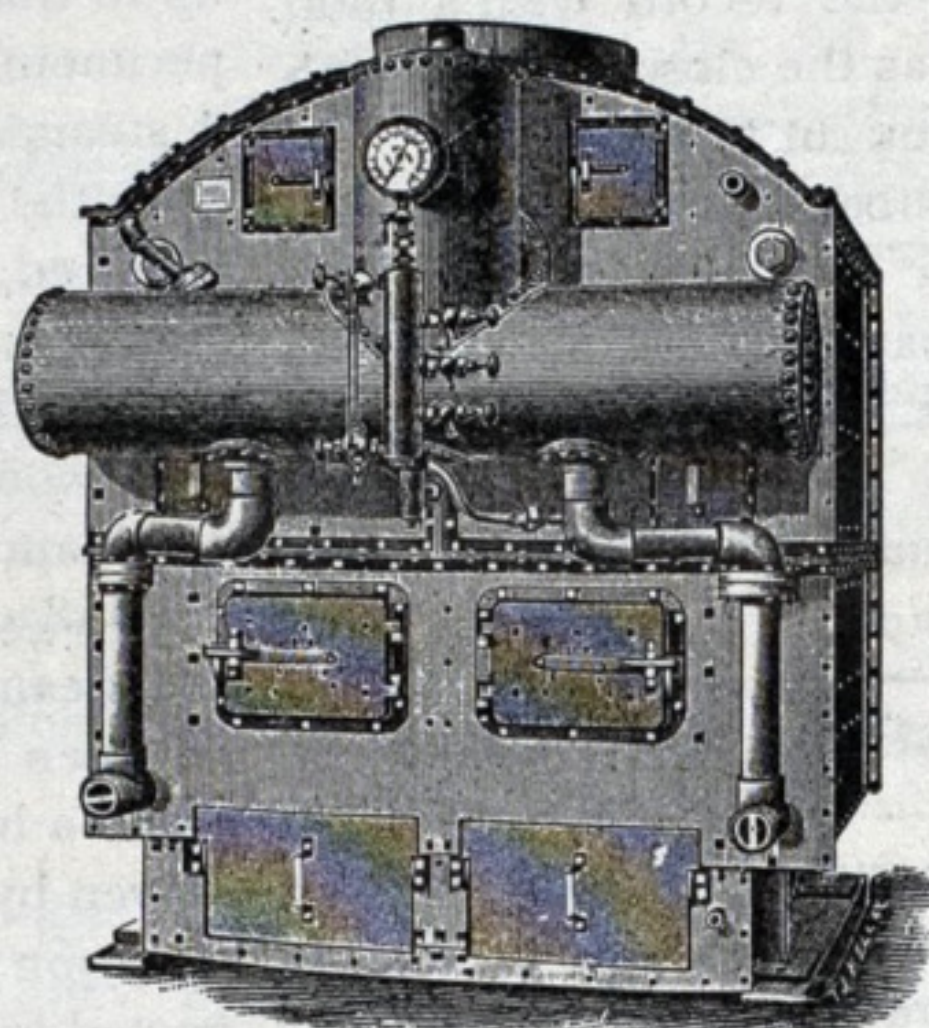
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57 WADE BUILDING. CLEVELAND, OHIO.

### ANOTHER LARGE SHIP BUILDING CONTRACT PLACED.

Messrs. Pickands, Mather & Co. Cleveland, placed a contract this week with the Chicago Ship Building Co., for the construction of a steel cargo steamer and schooner or consort having the following general dimensions:

The steamer to be 450 feet over all, 430 feet keel, 50 feet beam and 28½ feet depth of hold. The consort will be six feet longer on the keel, with the same over all, beam and depth of hold, measurements.

Consultation regarding the type of engines and boilers as well as other important equipment for both vessels will probably be brought to a close this week, when the inclusive specifications with the time of the completion of the contract etc., may be determined upon. This rather important contract will furnish a fair share of work for the next ninety days at least to the employes of the Chicago Ship Building Co., and it may be stated that a large force of skilled labor have also a full seasons work at the yards of the American Steel Barge Co., West Superior, Wis. Capt. James Davidson's, wooden shipyard in Bay City, Mich., the Globe Iron Works Co., Cleveland, and at the Lorain yards of the Cleveland Ship Building Co., as well as the Toledo yards of the Craig Ship Building Co.

It is not beyond our province to state at this time that other contracts for new tonnage are in their preliminary stages and will probably be placed at yards where a stated time for delivery can be guaranteed by the ship builders.

### NEW LIGHT-HOUSE FOR DULUTH.

Major Sears, Corps of Engineers, U. S. A., stationed at Duluth, in charge of the conservancy and improvement of rivers and harbors on Lake Superior, has received from Major Adams, light-house engineer, Detroit, Mich., plans for the new light-house and whistle house which will be erected on the new south pier of the Duluth canal, or harbor entrance, when it is completed. It will be a neat building of brick and stone 40 x 20 feet in size. It will be located at the end of the pier and will be a very different structure from the one now used. The fog whistle will be placed in a recess in the building which will act as a reflector, keeping the sound from the city and throwing it lakeward.

THE schooner Wenona, which was beached near the mouth of the Portage Lake Canal a few months ago, will be released by the owners next spring.

### VISIBLE SUPPLY OF GRAIN

As compiled for The Marine Record, by George F. Stone, Secretary Chicago Board of Trade.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY Bushels.
Buffalo.....	2,843,000	1,424,000	878,000	207,000	1,033,000
Chicago.....	2,180,000	7,142,000	628,000	123,000	321,000
Detroit.....	97,000	542,000	3,000	16,000	106,000
Duluth and Superior	2,551,000	1,070,000	56,000	57,000	588,000
Milwaukee.....	16,000	.....	1,000	1,000	60,000
Montreal.....	50,000	73,000	67,000	2,000	21,000
Oswego.....	8,000	156,000	.....	.....	68,000
Toledo.....	118,000	355,000	95,000	11,000	.....
Toronto.....	75,000	.....	.....	.....	56,000
On Canal.....	274,000	516,000	149,000	.....	544,000
Grand Total.....	23,369,000	22,263,000	5,586,000	1,139,000	3,898,000
Corresponding Date, 1897	33,656,000	42,058,000	15,261,000	3,595,000	5,891,000
Increase.....	1,977,000	.....	.....	118,000	114,000
Decrease.....	.....	975,000	170,000	.....	.....

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

### DISABLED STEERING GEAR.

The argument that some of the big losses are caused by disabled steering gear in heavy seas is a good one, in the opinion of John C. Shaw, the well-known admiralty lawyer, of Detroit. "In April of 1893, it will be remembered, the steamer Charles F. Eddy lost her consort, the Newell Eddy, in a 60-mile gale on Lake Huron, and the consort went down with all hands," said Mr. Shaw. "Then the steering gear of the steamer gave out and she fell off into the trough of the sea for a long time and had a terrible time of it. Finally, after much labor, the break in the wheel chains, which had been placed, was reached by the engineer and his assistants, who had to cut through the ceiling to find it. Then came another long interval of patching on the chain, and eventually, it was re-linked. But the boat in the meantime was in imminent danger of foundering, through the breaking of her hatches and doors. Everything held well, however, and she came out of it all right."

"JONES, my wife says she saw lights burning in your house when she came home from the ball at 2 o'clock this morning, and she thought it a little strange." "Thought it a little strange, did she? Why it was more than that—it was a little stranger."—Fairplay.

### SUN'S AMPLITUDES.

The following approximate amplitudes of the Sun's rising will be given each week in this column during the season of navigation. A second bearing may be taken by compass at sunset by reversing the east bearings given for the nearest latitude, as the change in declination for a few hours makes but a slight difference in the true bearing of the Sun's setting:

LAKE ERIE AND S. END LAKE MICHIGAN, LAT. 42° N.

Sunrise.	Bearing.	Bearing.
December 2.....	E. 30° S.....	S. E. by E. ¼ E.
December 5.....	E. 31° S.....	S. E. by E. ¼ E.
December 9.....	E. 32° S.....	S. E. by E. ½ E.

LAKE ONTARIO, S. END HURON AND CENTRAL PORTION LAKE MICHIGAN, LAT. 44° N.

Sunrise.	Bearing.	Bearing.
December 2.....	E. 31° S.....	S. E. by E. ¼ E.
December 5.....	E. 32° S.....	S. E. by E. ½ E.
December 9.....	E. 33° S.....	S. E. by E.

N. END LAKES HURON AND MICHIGAN, LAT. 46° N.

Sunrise.	Bearing.	Bearing.
December 2.....	E. 32° S.....	S. E. by E. ¼ E.
December 5.....	E. 33° S.....	S. E. by E.
December 9.....	E. 34° S.....	S. E. by E.

LAKE SUPERIOR, LAT. 48° N.

Sunrise.	Bearing.	Bearing.
December 2.....	E. 34° S.....	S. E. by E.
December 5.....	E. 35° S.....	S. E. by E. ¾ E.
December 9.....	E. 35° S.....	S. E. by E. ¾ E.

With a compass correct magnetic, the difference between the observed and true bearing will be the variation for the locality. Should there be any deviation on the course the vessel is heading at the time of taking the bearing, the difference between the observed and the true amplitude after the variation is applied, will be the amount of deviation on that course. If the correct magnetic bearing is to the right of the compass bearing, the deviation is easterly, if to the left, the deviation is westerly.

### VESSELS CLASSED.

Vessels classed and rated by the American Bureau of Shipping in the "Record of American and Foreign Shipping" this week are as follows: American twin screw, Admiral Dewey, owned by the American Mail Steamship Company; American screw, Philadelphia, owned by the Pilots' Association, of Philadelphia; American three-masted schooner, Melissa Trask; American bark, Ella; American bark, Evie Reed; American barkentine, Rachel Emery; American ship E. B. Sutton; British schooner, Sir Louis; British schooner, Gladstone; and British half brig, Ida Maud.



## NEW PUBLICATIONS AND REVIEW.

"Navigation and Nautical Astronomy," by Prof. J. H. C. Coffin, revised by Comdr. Charles Belknap, U. S. N., is now in its seventh edition is an excellent work of 221 pages, prepared more expressly for the use of the U. S. Naval Academy. The volume should be a vade mecum for the younger members of the naval service as well as cadets and apprentices in the mercantile marine. The entire curriculum required from an expert navigator is contained within the covers of this valuable and now well-known assistant to the aspirant for navigational honors. Burrow Bros.' Co., Cleveland, O.; price, \$3.50. D. Van Nostrand & Co., New York, publishers.

"Algebra" is the subject of another volume in Chas. Griffin & Co.'s nautical series, published in this country by the J. B. Lippincott Co., Philadelphia, price, \$1.50. It is a manual for the self-instruction of the young officer, and is designed especially to explain and apply the principles of algebra to the art of practical navigation. It tells just what the navigator wants to know in this respect, and gives numerous examples and illustrations how to work out the problems that confront him. In the way of making crooked things plain, it is one of the best of this most admirable series and will be welcomed by many of the more expert mathematicians among the rising generation, also as an excellent handbook for reference and for navigational scientists to "brush up" upon.

"Luce's Seamanship," revised edition; D. Van Nostrand & Co., New York. This text book of seamanship, by Rear-Admiral S. B. Luce, U. S. N., now in its fourth edition, is one of the standard works and in use by the United States

Naval Academy. Among the most interesting chapters contained in Luce is that on the hull, spars and sails with a valuable dictionary giving the definition of terms used in the various parts of the construction of metal and wooden vessels. We would also call attention to the chapters on the law of storms, the handling of vessels under steam and tending ship at single anchor. While a large portion of Luce is given up to the masting, rigging, and handling of vessels under sail there is not a single paragraph in the revised edition that could be dispensed with, as each line tells its own story. Luce is indispensable to the seaman who desires to be proficient and skillful in his calling. The Burrow Bros. Co., Cleveland. Price, \$10.

"Steam Navigation," by James Croil, is a Canadian contribution to the subject of navigation and its relation to the commerce of the Dominion and the United States. The author has, in a previous volume, made a specialty of Canadian history and this work deals particularly with the rise and progress of steam navigation in and to and from Canada. It is published by Wm. Briggs, 29-33 Richmond street, W., Toronto, and presents not only history, but portraits and illustrations of men and vessels that have become conspicuous in all the types of steam navigation with which Canada has had to do since the earliest days. There are 62 illustrations of steam vessels, 25 portraits including prominent captains of the Allan and other steamship lines, and 10 plates of canal locks, Cunard track charts, Gulf port map and miscellaneous matters. The chapter on the "Steam Commerce of the Great Lakes" will prove of special interest to many, a lot of valuable information being attractively presented in it. The latest development in steam propulsion,

water jets, roller boats, the Turbinia, etc., are also reviewed in a final chapter. The book comprises 380 pages, and is comprehensively indexed for reference. To any one interested in Canadian water commerce it is well worth \$1.50, the price of the volume, as it preserves in a compact form much general and valuable history.

WHILE the entire lake marine of Canada, it appears, comprises less than 900 steam vessels, mostly small, with an aggregate tonnage under 100,000, one company alone out of the many on the United States side owns a fleet of close on to 100,000 tons. The lake marine of the United States comprises in round numbers some 3,500 ships, with a tonnage of upward of 1,500,000, and of this enormous fleet fully one half of the tonnage is that of steamers. A striking fact is that some five hundred of the steamers are a tonnage of from 1,000 to 5,000 tons each. Several lake ship owners at United States ports are found to own magnificent fleets, numbering from six to twenty powerful vessels, and some of these fleets comprise scarcely any steamers of less than 4,000 tons.

U. S. ENGINEER OFFICE, Duluth, Minn., Nov. 19, 1898. Sealed proposals for building pile and timber revetments for ship canals across Keweenaw Point, Mich., will be received here until noon, Dec. 20, 1898, and then publicly opened. Information furnished on application here, or, at branch office, Houghton, Mich. CLINTON B. SEARS, Major, Engrs. 47-50

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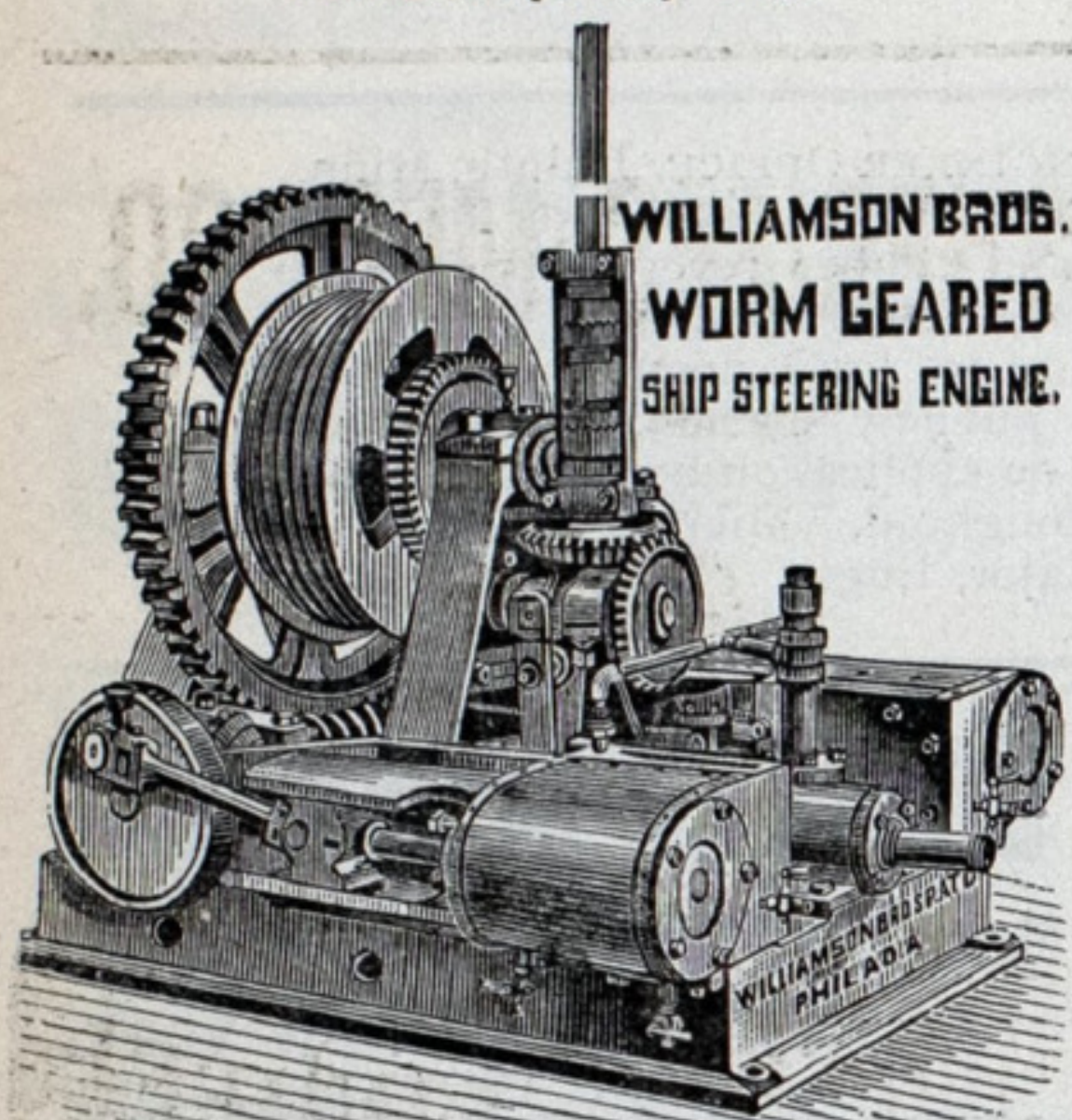
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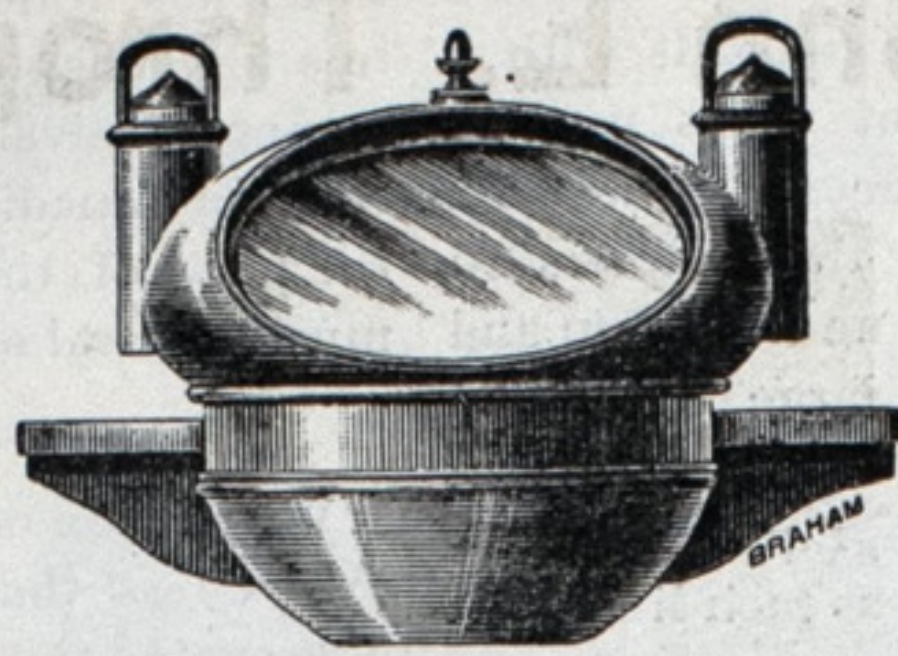
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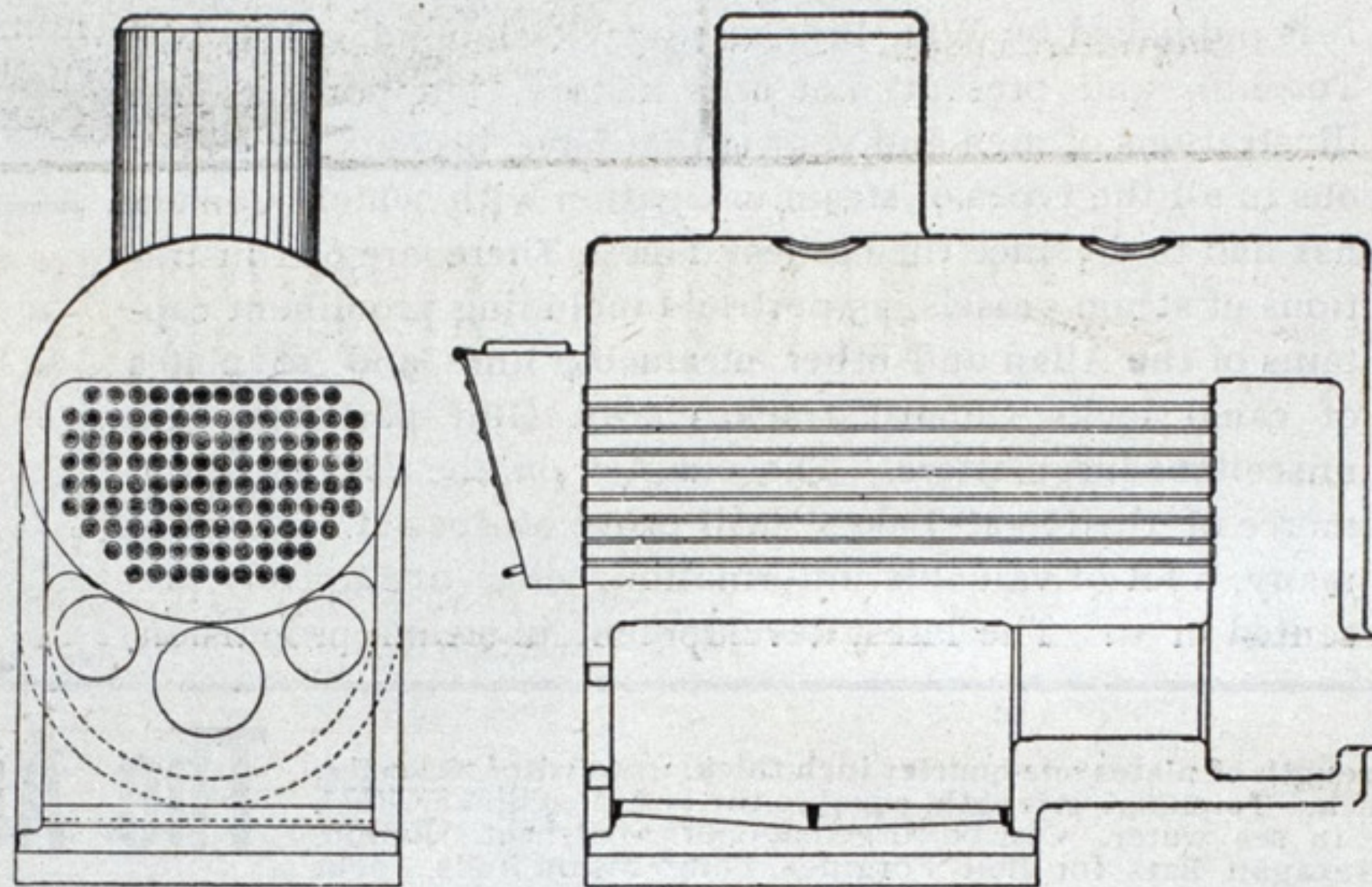
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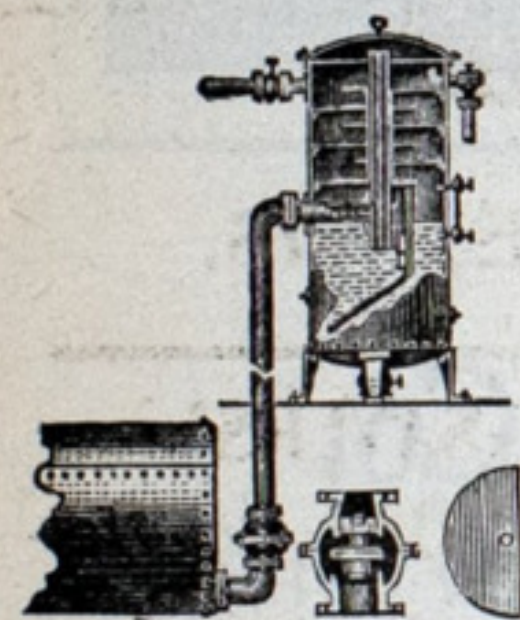
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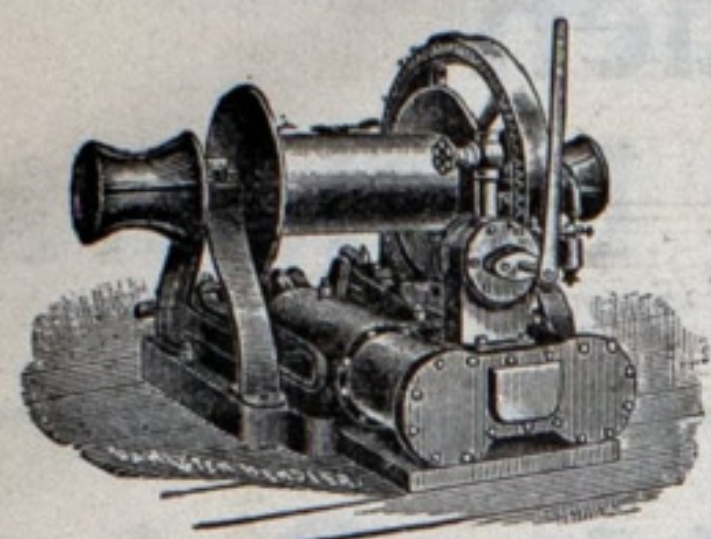
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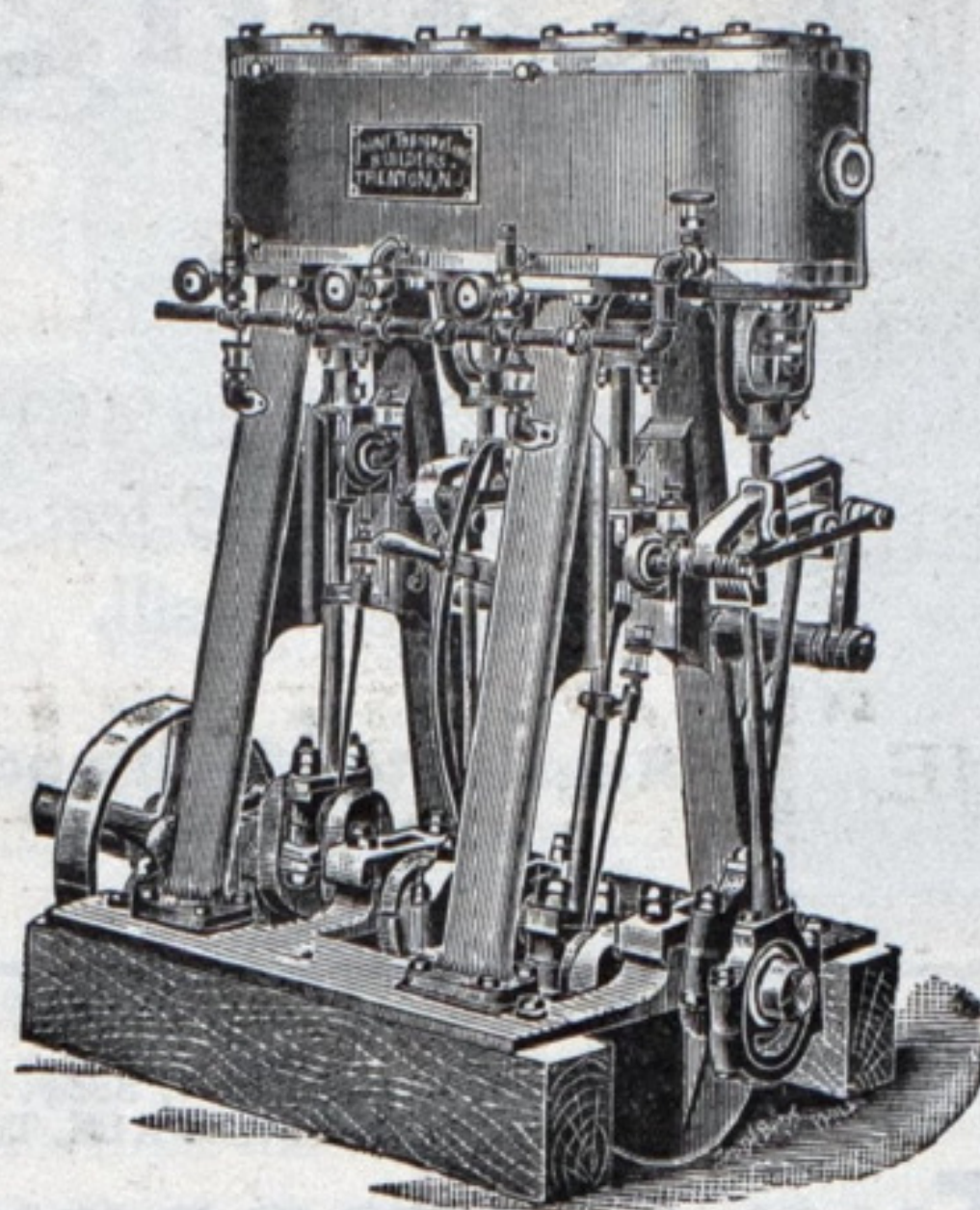
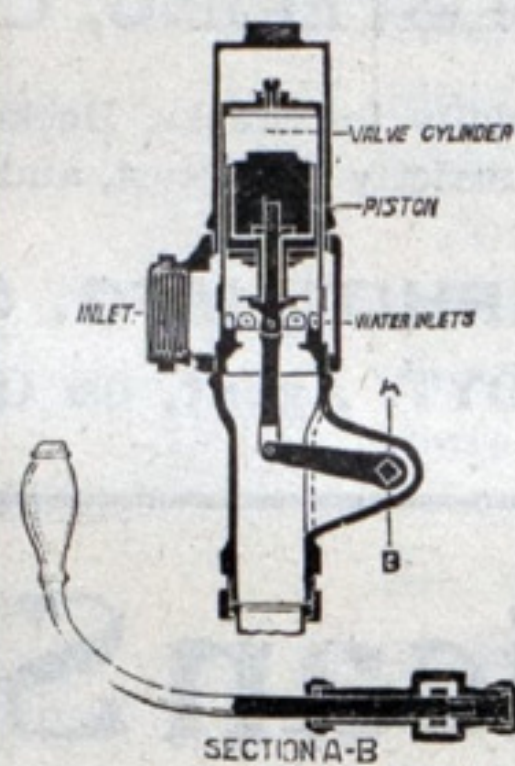
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Takes the place of the noisy and dirty overhead  
flush tank, and isTHE BEST SYSTEM EVER INVENTED FOR USE  
ON STEAM VESSELS.Owners and constructors of Steamships, Yachts and  
Steamboats have found it indispensable. Used by the U. S. War  
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U. S. Gunboat Amphitrite. Also Albany Day Line Steamers and  
others.THE KENNEY FLUSHOMETER is patented and manufactured only by The Kenney  
Co., who guarantee the successful operation of the system.SEND FOR  
ILLUSTRATED PAMPHLET.

THE KENNEY COMPANY,

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CONTRACTORS AND CONSULTING ENGINEERS,  
HARBOR AND CANAL WORKS, ETC.

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A Full and Complete Course of  
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TWO PRIZES, \$50; SIX \$25.

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Tugs, Lighters, Steam Pumps, Hawsers, Hydraulic Jacks and Diving Appliances always ready

TUG MONARCH—Engine Compound, Cylinder 16 and 30 in. diameter, 30 in. stroke, steam pressure al-  
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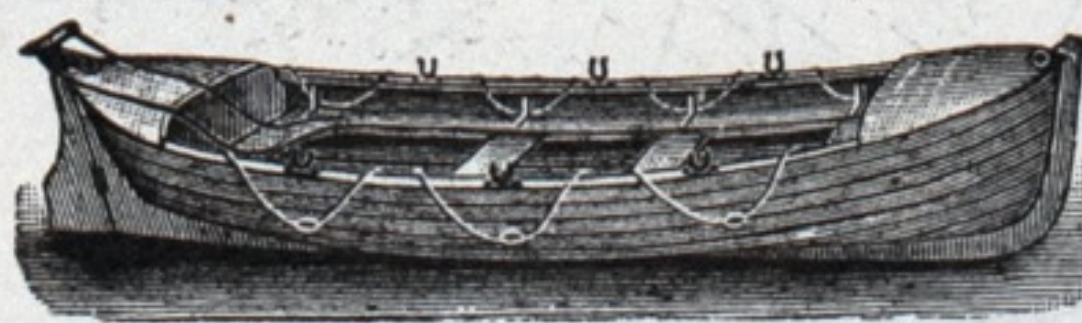
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SEVEN AND FOURTEEN INCH SUCTION.

## NEVERSINK CORK JACKET AND LIFE BELT.

Warranted 24 lb. Buoyancy and full Weight of Cork, as required by U. S. Inspectors. Consolidated Cork  
Life Preservers. Superior to all others. Rings Buoys and Fenders. SAFEST CHEAPEST.  
Approved and adopted by U. S. Board of Supervising Inspectors.  
Also adopted by the principal Ocean, Lake and River Steamer Lines as  
the only Reliable Life Preserver. Vessels and trade supplied. Send for  
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Awarded four medals by World's Columbian Exposition.

METALLIC  
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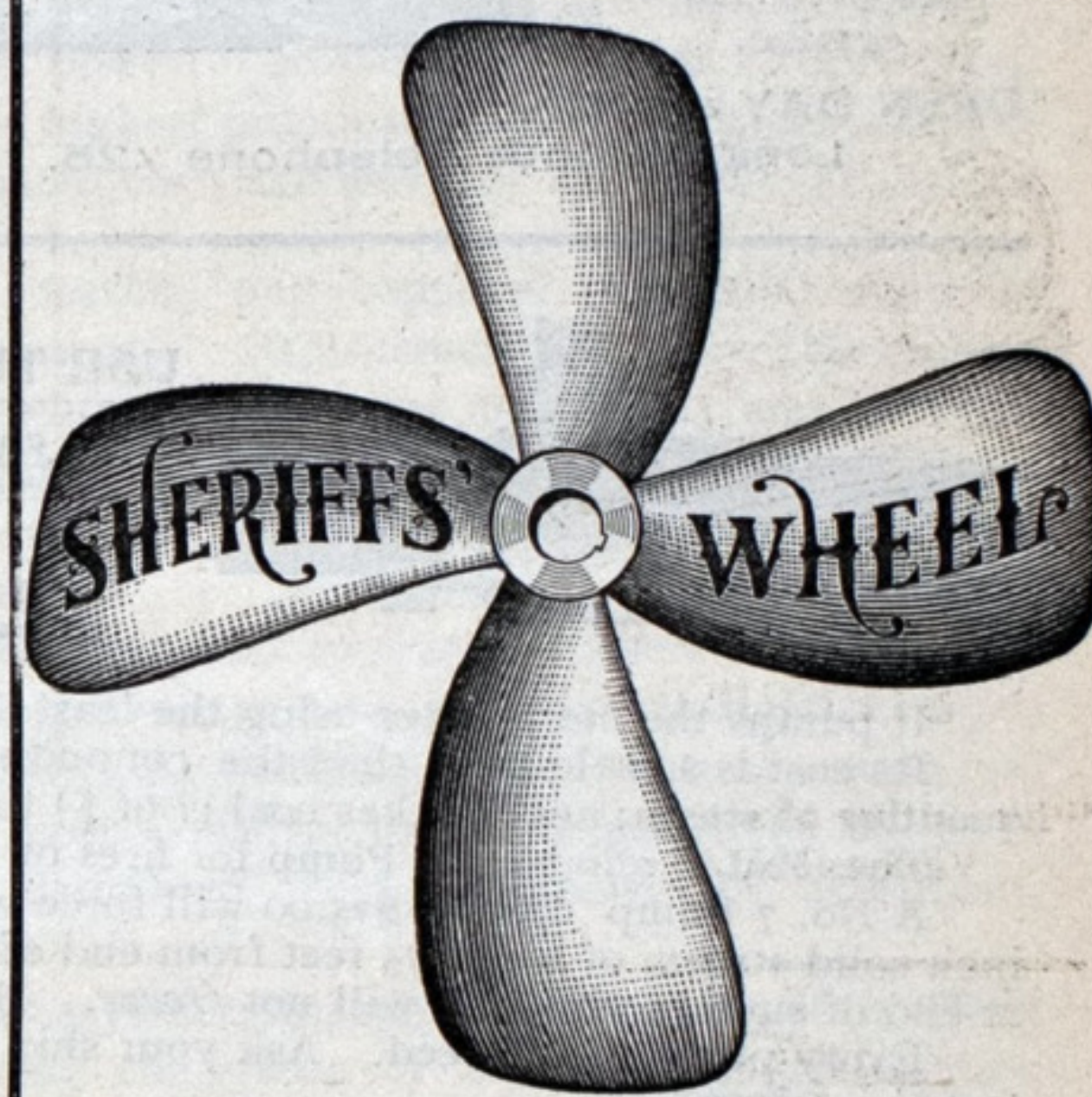
Metallic Life Rafts, Marine Drags.

Manufacturer of Woolsey's Patent Life Buoy, which is the lightest,  
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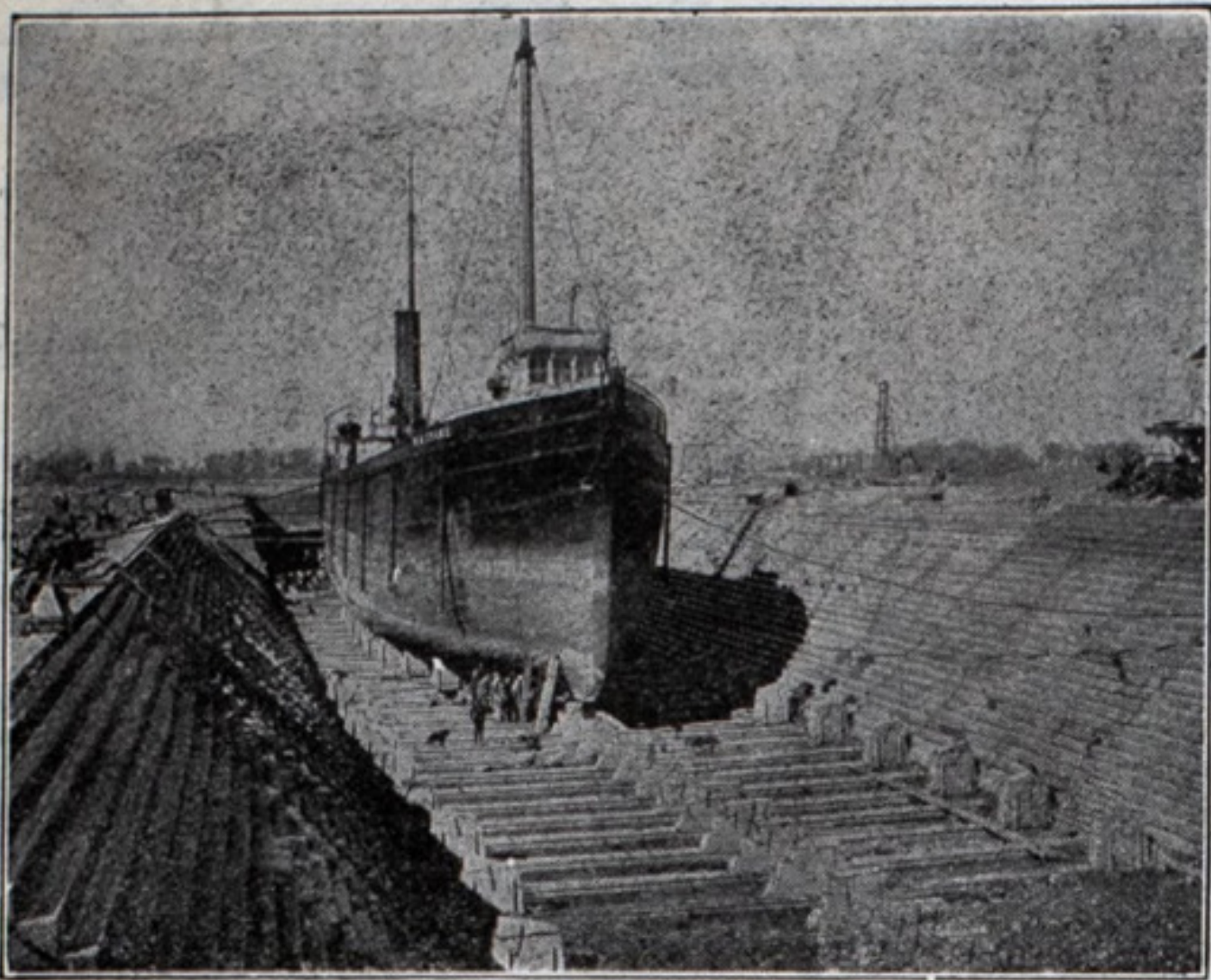


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## SILBAR'S LIFE-SAVERS' PNEUMATIC COAT.

Combining heat,  
health and safety.  
When working  
near the water  
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lies flat like an or-  
dinary coat and  
weighs no more  
Is built strong and  
durable, of heavy  
texture cloth cov-  
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is strictly water-  
proof and air-tightWRITE FOR  
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tion of its true  
merit toThe Lion  
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Company,147 Reed St.,  
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The Marine Record in-  
cluding Supplements.





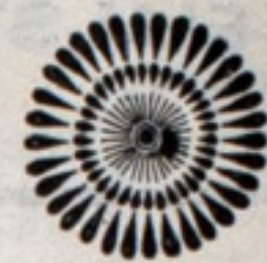
# Craig Ship Building Co.

TOLEDO, OHIO.

New Dry-Dock 450 feet long, 110 feet wide on top, 55 feet wide on bottom, 16 feet water on sill.

Repairs to Metal and Wooden Ships a Specialty.

**Metal**  
and **Wooden**  
**Ship Builders.**



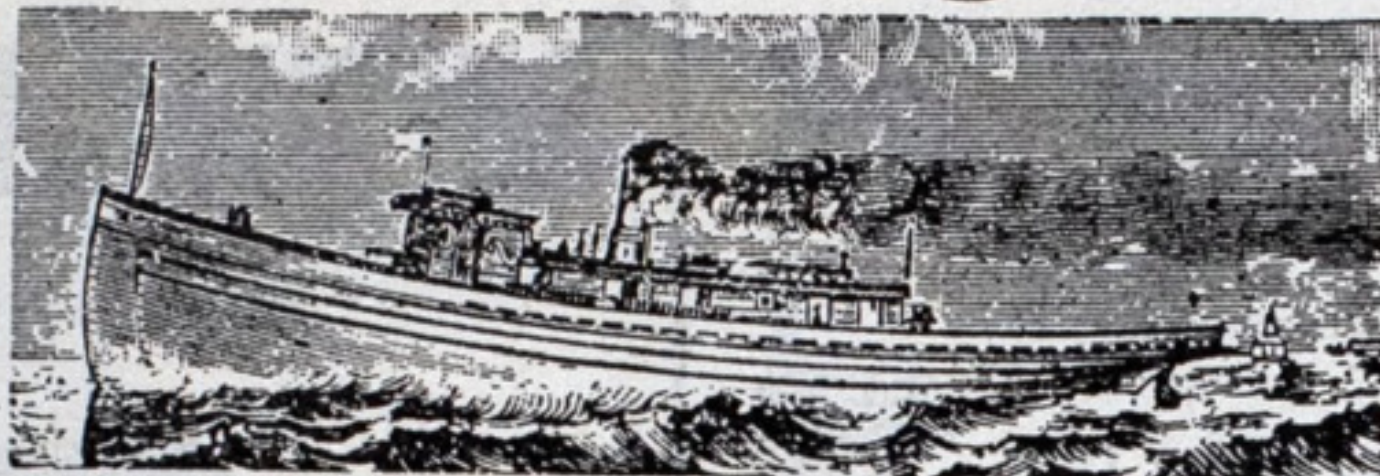
H. A. HAWGOOD, Pres't.  
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J. R. SPRANKLE, Treas.

## The Cleveland Tug Company,

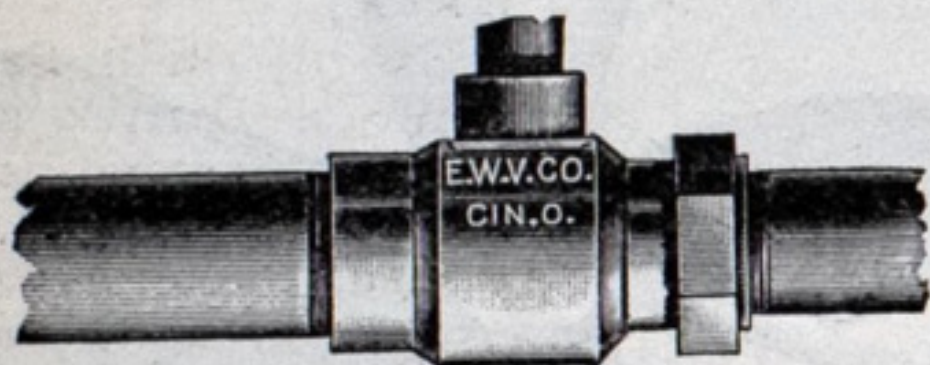
First-class Tugs,  
Steam Pumps,  
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Promptly on  
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Steamers when outside wanting our Tugs, blow one long whistle and as many short ones as they want tugs.

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USE THE VANDUZEN  
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## PUMP

The BEST Steam Jet Pump in the WORLD.

It pumps the most water using the least steam.  
Its cost is a little more than the common syphon, but will use only one-third the quantity of steam; and it takes coal (? of \$) to make steam.  
The ONLY reliable Jet Pump for fires on steam vessels.  
A No. 7 Pump costing \$25.00 will force water through 50 feet of hose and throw a 3/4 inch solid stream of water 75 feet from end of nozzle without fail as long as there is water at end of suction pipe. It will not freeze. Has no valves.  
Every pump guaranteed. Ask your ship chandler for them, or write to us for illustrated catalogue.

THE E. W. VANDUZEN CO., Cincinnati, O.

## A. Gilmore's Sons,

**Dry-Docking,  
Ship Building and  
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EAST SIDE, NEAR IRONVILLE, - - - TOLEDO, O.

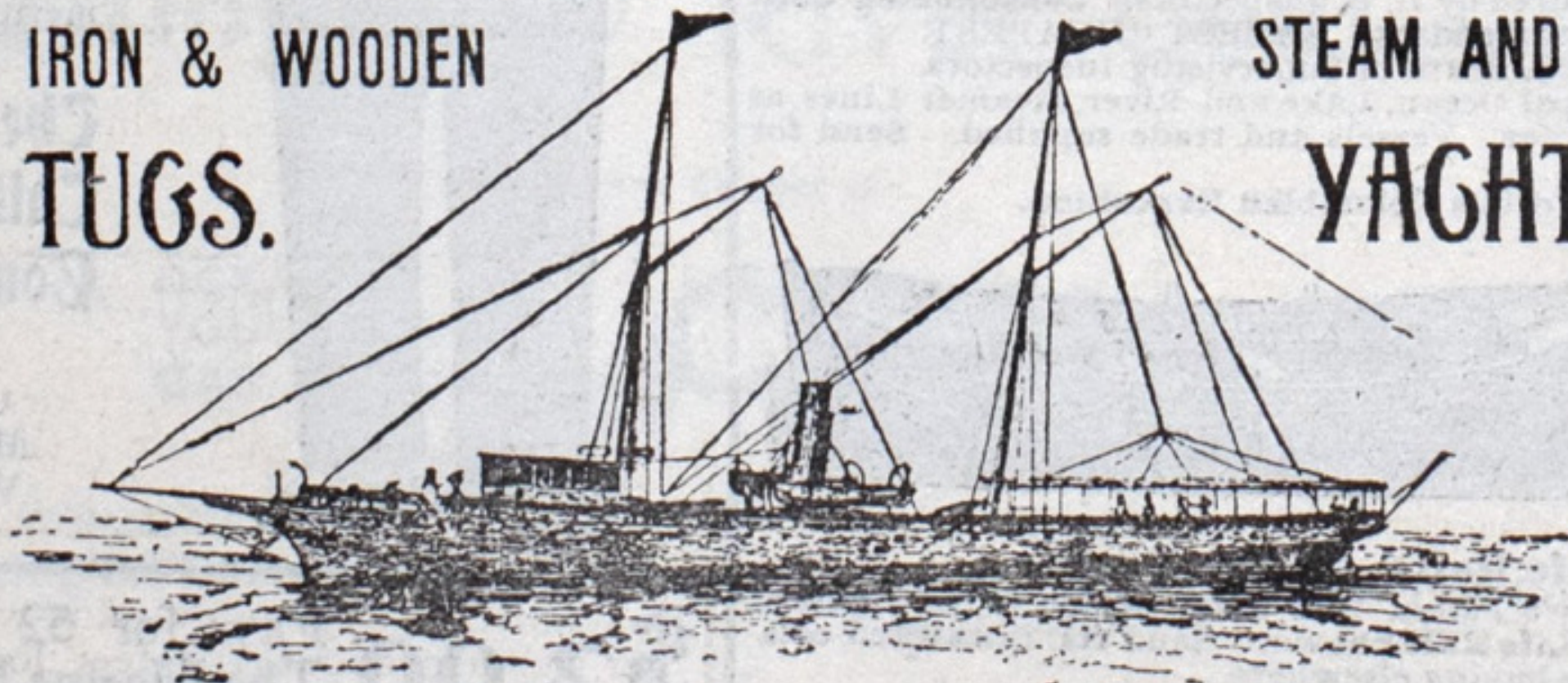
Dimensions of Dock, 236 feet long, 55 feet wide at top and 37 feet wide at gate. Nine feet water over sill. RATES OF DOCKING, Ten Cents per registered gross ton for vessels over 200 tons. Jig Mill and Planer in connection with Dock.

'PHONE NO. 157.

LIFE BOATS. YAWLS. & LIFE RAFTS.  
**DETROIT BOAT WORKS,**  
DETROIT, MICH.

STEEL, IRON & WOODEN  
**TUGS.**

STEAM AND SAIL  
**YACHTS.**



All kinds of Pleasure Boats, Fishing & Hunting Boats, Shells, Barges, Gigs & Canoes

Paint Your  
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## Superior Graphite Paint

NO BLISTERING, CRACKING OR SCALING.

Made especially for Stacks, Decks, Sides, Hulls, and Water Compartments.  
Strictly Anti-Rust, and most durable and economical.

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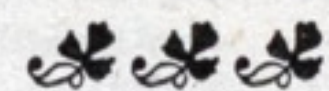
C. H. HOYT, Agent, 60 Gladstone St., CLEVELAND, O.

## American Steel Barge Co.

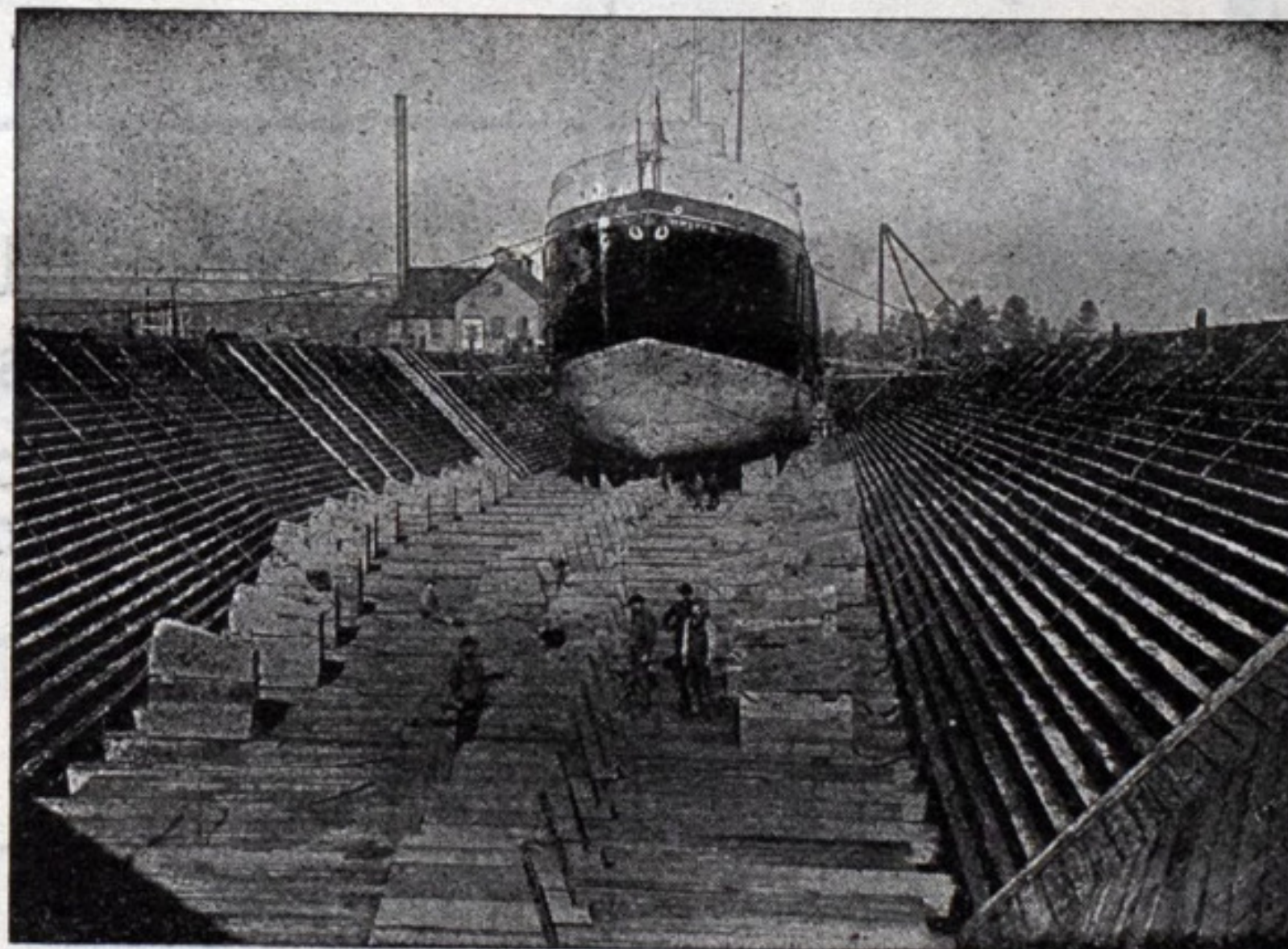
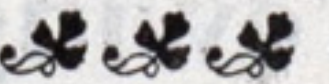
**STEEL AND METAL SHIPS**

Of all Classes built on shortest possible notice at our yards at  
**WEST SUPERIOR, WIS., and also at EVERETT, WASH.**

PHOTOGRAPH OF 300-FOOT BOAT IN DOCK.



Plates and  
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always on  
hand to  
repair all  
kinds of  
Metal  
Ships in  
Shortest  
Time.



Best  
Quality of  
Oak in  
Stock  
for  
Repairing  
Wooden  
Vessels  
of all  
Classes.



### SIZE OF DOCK

Length, Extreme.....	587 feet.	Entrance, Top.....	55 feet 9 in.
Breadth, Top.....	90 " 4 in.	Entrance, Bottom.....	50 "
Breadth, Bottom.....	52 "	Depth over Sills.....	18 "

**LARGEST DRY-DOCK ON THE LAKES.**

Prices for Repairs and Docking  
same as at Lower Lake Ports.

**SUPERIOR, WIS.**

A Number of Propeller Wheels in Stock at Dry-Dock.

**BARRY'S—CHICAGO.**

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Have a Wrecking Outfit. We have purchased the Grummond Wrecking Appliances, and are prepared to offer our patrons good service.

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Three Long Whistles Call our Tugs.